

SEQUENCE LISTING

<110> Horvitz, H. Robert
 Davison, Ewa M.
 Lu, Xiaowei

<120> A Tumor Suppressor Pathway in C. Elegans

<130> 01997/536002

<150> US 60/208,802

<151> 2000-06-02

<160> 78

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 386

<212> PRT

<213> Caenorhabditis elegans

<400> 1

Met	Ser	Lys	Ile	Lys	Thr	His	Ser	Thr	Gly	Ser	Lys	Arg	Thr	Val	Pro
1				5					10					15	
Phe	Tyr	Lys	Leu	Pro	Pro	Pro	Val	Pro	Leu	Pro	Pro	Leu	Pro	Pro	Pro
			20					25					30		
Asp	Pro	Thr	Arg	Tyr	Phe	Ser	Thr	Glu	Lys	Tyr	Ile	Ala	Leu	Ser	Lys
		35					40					45			
Asp	Glu	Lys	Phe	Lys	Phe	Asp	Asp	Tyr	Asp	Val	Asn	Asp	Glu	Thr	Leu
	50					55					60				
Lys	Lys	Val	Val	Leu	Asn	Glu	Ile	Gly	Lys	Cys	Pro	Asp	Ile	Trp	Ser
65					70					75					80
Ser	Arg	Ser	Gln	Ala	Ala	Ile	Met	Glu	His	Tyr	Pro	Ile	Val	Ala	Thr
				85					90					95	
Glu	Thr	Tyr	Arg	Arg	Thr	Gly	Leu	Leu	Leu	Ser	Ile	Lys	Ser	Leu	Lys
			100					105					110		
Gln	Ile	Tyr	Lys	Cys	Gly	Lys	Asp	Asn	Leu	Arg	Asn	Arg	Leu	Arg	Val
		115					120				125				
Ala	Ile	Val	Ser	Lys	Arg	Leu	Thr	Pro	Ala	Gln	Val	Glu	Ala	Tyr	Met
	130					135					140				
Trp	Arg	Trp	Glu	Phe	Tyr	Gly	Phe	Ile	Arg	Tyr	Tyr	Arg	Asp	Tyr	Thr
145					150					155					160
Gln	Arg	Trp	Glu	Ala	Asp	Leu	Leu	Lys	Asp	Leu	Asp	Val	Val	Leu	Gly
			165						170					175	
Leu	Glu	Ala	Arg	Arg	Ala	Ser	Lys	Asn	Met	Glu	Lys	Val	Asp	Ser	Gly
			180					185					190		
Glu	Leu	Met	Glu	Pro	Met	Glu	Pro	Met	Asp	Ser	Thr	Met	Asp	Glu	Met
	195						200					205			
Cys	Val	Glu	Glu	Glu	Pro	Tyr	Glu	Glu	Thr	Gly	Ser	Asn	Trp	Ser	Asp
	210					215					220				
Pro	Ala	Pro	Glu	Pro	Ser	Gln	Ser	Lys	Ser	Gln	Ser	Pro	Glu	Ala	Lys
225					230					235					240
Tyr	Pro	Gln	Ala	Tyr	Leu	Leu	Pro	Glu	Ala	Asp	Glu	Val	Tyr	Asn	Pro
			245						250					255	
Asp	Asp	Phe	Tyr	Gln	Glu	Glu	His	Glu	Ser	Ala	Ser	Asn	Ala	Met	Tyr
			260					265					270		

Arg	Ile	Ala	Phe	Ser	Gln	Gln	Tyr	Gly	Gly	Gly	Gly	Ser	Pro	Ala	Val
	275						280					285			
Gln	Lys	Pro	Val	Thr	Phe	Ser	Ala	Gln	Pro	Ala	Pro	Ala	Pro	Val	Arg
	290					295					300				
Glu	Ala	Pro	Ser	Pro	Val	Val	Glu	Asn	Val	Ser	Ser	Ser	Ser	Phe	Thr
305					310					315					320
Pro	Lys	Pro	Pro	Ala	Met	Ile	Asn	Asn	Phe	Gly	Glu	Glu	Met	Asn	Gln
				325					330					335	
Ile	Thr	Tyr	Gln	Ala	Ile	Arg	Ile	Ala	Arg	Glu	Gln	Pro	Glu	Arg	Leu
			340					345					350		
Lys	Leu	Leu	Arg	Lys	Ala	Leu	Phe	Asp	Val	Val	Leu	Ala	Phe	Asp	Gln
	355						360					365			
Lys	Glu	Tyr	Ala	Asp	Val	Gly	Asp	Leu	Tyr	Arg	Asp	Leu	Ala	Gln	Lys
	370					375					380				
Asn	Ser														
385															

<210> 2
 <211> 1276
 <212> DNA
 <213> Caenorhabditis elegans

<400> 2
 agaatctgcc aaaatgtcaa agataaaagac acattccact ggctcaaaac ggacggtacc 60
 attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccacccg atccaacccg 120
 gtacttctcg acggaaaagt acatcgact gagcaaagat gagaaattca aatttgatga 180
 ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgcc 240
 ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
 tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
 atgcggaaag gacaatctcc gaaaccggct tcgctggca attgtaagca agcggcttac 420
 accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
 tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tgggtgctcg 540
 gctcgaggct cggcgagcat cgaaaaatat ggaaaagggtg gattctgggg agctcatgga 600
 gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
 ggagacaggg tccaattgga gcgatccggc gccggaacca tccaatcca aatcccagtc 720
 cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
 tgacgatttc tatcaagagg aacatgaatc cgcatacaac gccatgtatc ggatcgcttt 840
 ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca ctttttagtgc 900
 tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
 atcgagtttc accccgaagc ccccggccat gatcaacaat tttggtgagg agatgaacca 1020
 aataacatac caagcgatcc gtattgcccc agagcagccg gaacgtctga aattgctccg 1080
 taaggcactt ttcgacgttg tcctggcggt tgatcagaag gaatacgccg atgttgggga 1140
 tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
 ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
 aaaaaaaaaa aaaaaa 1276

<210> 3
 <211> 322
 <212> PRT
 <213> Caenorhabditis elegans

<400> 3
 Met Asp His His Ala Met Tyr Arg Thr Ala Glu Phe Asn Lys Thr Thr
 1 5 10 15
 Val Arg Leu Leu Ala Glu Phe Ile Glu Lys Thr Gly Gln Asn Ala Thr
 20 25 30
 Ile Val Asn Met Asp Ser Phe Leu Glu Phe Phe Ala Tyr Leu Asn Pro
 35 40 45

Thr	Ala	Pro	Ile	Pro	Thr	Val	Pro	Glu	Ile	Glu	Lys	Gln	Leu	Leu	Leu
50						55					60				
Lys	Ser	Pro	Ile	Arg	Cys	Ile	Val	Cys	Gly	Met	Glu	Thr	Glu	Ser	Asp
65					70					75					80
Ser	Ala	Val	Thr	Leu	Ser	Ile	Asp	Asn	Ala	Ser	Ile	Ile	Leu	Thr	Ala
				85					90					95	
Thr	Val	Ile	Gly	Tyr	Cys	Arg	Asp	Pro	Ser	Asp	Ala	Val	Asn	Gln	Ile
			100					105					110		
Arg	Lys	Glu	Ser	Leu	Arg	Ala	Cys	Thr	Lys	His	Phe	Asn	Ser	Ile	Phe
			115				120					125			
His	Val	Ile	Phe	Glu	Gly	Leu	Gln	Ile	Glu	Asn	Thr	Tyr	Cys	Ala	His
			130			135					140				
His	Ala	Lys	Tyr	Ser	Leu	Ala	Asn	Arg	Trp	Cys	Lys	Val	Tyr	Thr	Met
145					150					155					160
Ile	Arg	Ser	Ser	Leu	Gly	Glu	Gln	Phe	Thr	Lys	Phe	Asp	Val	Arg	Asn
				165					170					175	
Phe	Lys	Ser	Ile	Leu	Gln	Ser	Phe	Leu	Asp	Thr	Phe	Gly	Glu	Ile	Asp
			180					185					190		
Asp	Asp	Lys	Lys	Asp	Lys	Glu	Ser	Ser	His	Phe	Asp	Glu	Cys	Phe	Glu
		195				200					205				
Glu	Met	Asp	Ser	Glu	Asn	Val	Glu	Ile	Lys	Met	Glu	Ser	Pro	Gln	Glu
		210				215					220				
Glu	Ala	Ala	Glu	Lys	Ser	Lys	Phe	Ser	Glu	Asn	Leu	Val	Glu	Val	Lys
225						230				235					240
Leu	Glu	Pro	Ile	Glu	Thr	His	Glu	Leu	Asp	Lys	Thr	Ile	Ser	Asp	Phe
				245					250					255	
Ser	Ser	Ser	Asp	Ile	Ile	Asp	Ser	Ser	Gln	Lys	Leu	Gln	Gln	Asn	Gly
			260					265					270		
Phe	Pro	Glu	Lys	Val	Glu	Gln	Met	Asp	Lys	Tyr	Ser	Asn	Lys	Leu	Lys
		275					280					285			
Asp	Glu	Ala	Ser	Asp	Lys	Lys	Tyr	Glu	Lys	Pro	Gly	Lys	Lys	Asp	Tyr
		290				295					300				
Val	Glu	Glu	Glu	Gly	Tyr	Trp	Ala	Pro	Ile	Thr	Asp	Ser	Glu	Asp	Asp
305					310					315					320
Glu	Ala														

<210> 4
 <211> 1108
 <212> DNA
 <213> Caenorhabditis elegans

<400> 4
 gcaaaaaact agatattttg tggcattttt acaattaaaa aaccttttaa aaatggatca 60
 ccatgctatg taccgaaccg ctgaattcaa caaaactact gtccgattat tggcggaatt 120
 catcgaaaag actgggcaga atgcgacgat agtgaatatg gacagctttt tggagtcttt 180
 tgcgtatttg aatcccacgg ctccaattcc aacggttcca gaaattgaaa aacaattatt 240
 gctaaaatca ccgattcgtt gcattgtgtg tggaaatggaa actgaatcag attccgcagt 300
 gacattaagc atcgataatg cttcaattat tctcacagcg acagtaattg gttactgtag 360
 agatccaagt gatgcagtta atcaaatctg aaaggagagt cttcgagcat gcacgaaaca 420
 tttcaacagt attttccatg tcatcttcga aggactgcaa atcgagaaca cttactgtgc 480
 tcatcatgca aaatacagtc ttgccaatcg ttggtgcaaa gtctacacga tgattcgatc 540
 ttccctggggc gagcagttca caaagttcga tgtgcgcaat tttaaatcaa tattgcaatc 600
 atttttggat acttttgggtg aaattgatga cgacaaaaag gataaagaat cttctcattt 660
 tgatgaatgt tttgaagaaa tggattcaga aaacgtagaa attaaaatgg agagcccaca 720
 agaagaagct gcagagaaat cgaagttttc tgaaaaccta gtggaggtaa aactggaacc 780
 aattgaaact catgaacttg acaaaaactat atccgacttt tcttcaagtg atataattga 840
 ttcgtcccaa aaactgcagc aaaatggttt tcctgaaaaa gtggagcaaa tggacaaaata 900

tagcaacaaa ttgaaagatg aagcttcaga caaaaagtat gaaaagccag gaaaaaagga 960
ctacgttgaa gaagagggat actgggccc gatcaccgac agcgaggatg atgaagcctg 1020
aattttattta atcaaacgtt ttggaaattt tttttgtttt tgtcaataaa accatataac 1080
aataaaaaaaaa aaaaaaaaaa aactcgag 1108

<210> 5

<211> 498

<212> PRT

<213> Caenorhabditis elegans

<400> 5

Met	Ser	Glu	Phe	Leu	Lys	Ile	Val	Arg	Ala	Asn	Lys	Lys	Ser	Asp	Arg
1				5					10					15	
Lys	Leu	Asp	Lys	Thr	Tyr	Leu	Trp	Glu	Ser	Tyr	Leu	His	Gln	Phe	Glu
			20					25					30		
Lys	Gly	Lys	Thr	Ser	Phe	Ile	Pro	Val	Glu	Ala	Phe	Asn	Arg	Asn	Leu
			35				40					45			
Thr	Val	Asn	Phe	Asn	Glu	Cys	Val	Lys	Glu	Gly	Val	Ile	Phe	Glu	Thr
			50			55					60				
Val	Val	His	Asp	Tyr	Asp	Lys	Asn	Cys	Asp	Ser	Ile	Gln	Val	Arg	Trp
65				70					75					80	
Phe	Ala	Arg	Ile	Glu	Lys	Val	Cys	Gly	Tyr	Arg	Val	Leu	Ala	Gln	Phe
			85					90						95	
Ile	Gly	Ala	Asp	Thr	Lys	Phe	Trp	Leu	Asn	Ile	Leu	Ser	Asp	Asp	Met
			100				105						110		
Phe	Gly	Leu	Ala	Asn	Ala	Ala	Met	Ser	Asp	Pro	Asn	Met	Asp	Lys	Ile
			115				120					125			
Val	Tyr	Ala	Pro	Pro	Leu	Ala	Ile	Asn	Glu	Glu	Tyr	Gln	Asn	Asp	Met
			130			135					140				
Val	Asn	Tyr	Val	Asn	Asn	Cys	Ile	Asp	Gly	Glu	Ile	Val	Gly	Gln	Thr
145				150					155					160	
Ser	Leu	Ser	Pro	Lys	Phe	Asp	Glu	Gly	Lys	Ala	Leu	Leu	Ser	Lys	His
			165					170						175	
Arg	Phe	Lys	Val	Gly	Gln	Arg	Leu	Glu	Leu	Leu	Asn	Tyr	Ser	Asn	Ser
			180				185						190		
Thr	Glu	Ile	Arg	Val	Ala	Arg	Ile	Gln	Glu	Ile	Cys	Gly	Arg	Arg	Met
			195				200					205			
Asn	Val	Ser	Ile	Thr	Lys	Lys	Asp	Phe	Pro	Glu	Ser	Leu	Pro	Asp	Ala
			210			215					220				
Asp	Asp	Asp	Arg	Gln	Val	Phe	Ser	Ser	Gly	Ser	Gln	Tyr	Trp	Ile	Asp
225				230					235					240	
Glu	Gly	Ser	Phe	Phe	Ile	Phe	Pro	Val	Gly	Phe	Ala	Ala	Val	Asn	Gly
			245						250					255	
Tyr	Gln	Leu	Asn	Ala	Lys	Lys	Glu	Tyr	Ile	Glu	His	Thr	Asn	Lys	Ile
			260				265					270			
Ala	Gln	Ala	Ile	Lys	Asn	Gly	Glu	Asn	Pro	Arg	Tyr	Asp	Ser	Asp	Asp
			275				280					285			
Val	Thr	Phe	Asp	Gln	Leu	Ala	Lys	Asp	Pro	Ile	Asp	Pro	Met	Ile	Trp
			290			295					300				
Arg	Lys	Val	Lys	Val	Gly	Gln	Lys	Phe	Glu	Leu	Ile	Asp	Pro	Leu	Ala
305				310					315					320	
Gln	Gln	Phe	Asn	Asn	Leu	His	Val	Ala	Ser	Ile	Leu	Lys	Phe	Cys	Lys
			325						330					335	
Thr	Glu	Gly	Tyr	Leu	Ile	Val	Gly	Met	Asp	Gly	Pro	Asp	Ala	Leu	Glu
			340				345						350		
Asp	Ser	Phe	Pro	Ile	His	Ile	Asn	Asn	Thr	Phe	Met	Phe	Pro	Val	Gly
		355					360					365			
Tyr	Ala	Glu	Lys	Tyr	Asn	Leu	Glu	Leu	Val	Pro	Pro	Asp	Glu	Phe	Lys
			370			375					380				

Gly	Thr	Phe	Arg	Trp	Asp	Glu	Tyr	Leu	Glu	Lys	Glu	Ser	Ala	Glu	Thr
385					390					395					400
Leu	Pro	Leu	Asp	Leu	Phe	Lys	Pro	Met	Pro	Ser	Gln	Glu	Arg	Leu	Asp
			405						410						415
Lys	Phe	Lys	Val	Ile	Leu	Ile	Ser	Lys	Arg	Val	Gly	Leu	Arg	Leu	Glu
			420					425					430		
Ala	Ala	Asp	Met	Cys	Glu	Asn	Gln	Phe	Ile	Cys	Pro	Ala	Thr	Val	Lys
		435					440					445			
Ser	Val	His	Gly	Arg	Leu	Ile	Asn	Val	Asn	Phe	Asp	Gly	Trp	Asp	Glu
	450					455					460				
Glu	Phe	Asp	Glu	Leu	Tyr	Asp	Val	Asp	Ser	His	Asp	Ile	Leu	Pro	Ile
465					470					475					480
Gly	Trp	Cys	Glu	Ala	His	Ser	Tyr	Val	Leu	Gln	Pro	Pro	Lys	Lys	Tyr
			485						490						495

Asn Tyr

<210> 6
 <211> 1497
 <212> DNA
 <213> Caenorhabditis elegans

<400> 6
 atgtctgaat ttctgaaaat tgtcagagct aacaaaaaat cggacagaaa actcgataag 60
 acctacttgt gggaatccta tttacatcag ttcgagaaaag gaaaaacttc tttcattcca 120
 gttgaagcat tcaatcgtaa ccttacagtt aattttaacg aatgcgtgaa ggaaggagtt 180
 atcttcgaaa cagtggtcca tgattatgac aagaactgcg attcgattca agtcagatgg 240
 tttgcacgaa ttgaaaaagt ttgcggatac agagttcttg ctcagtttat cggagctgac 300
 acgaaatfff ggctcaatat tttatcggac gatatgtttg gtttgcaaaa cgccgcaatg 360
 agtgatecca atatggataa aattgtatat gctccgccgc ttgcaatcaa cgaagaatac 420
 caaaatgata tggtaaatta tgtaaataat tgcattgatg gcgaaatcgt cggccaaact 480
 tcgctgtctc caaaattcga tgaagggaag gctctcctaa gcaagcatcg tttcaaagtt 540
 ggacaacgtc ttgaactatt aaattattcc aattctactg aaatacgcgt agcgcgaatt 600
 caagaaatat gtggacgacg aatgaatgta tctatcacia agaaagactt tcccgaatcg 660
 cttccagatg cagatgacga cagacaagtc tttagctctg gatctcaata ttggatagac 720
 gaggggaagct tcttcatatt tctgttgga tttgcagcag tcaatggata tcaactaaat 780
 gcgaaaaagg aatatattga gcacacaaat aaaattgctc aagcaataaa aaatggagaa 840
 aatccaagat atgactcaga cgacgtcaca tttgatcaat tagcaaaaga tccaattgat 900
 cccatgattt ggagaaaagt taagggttga caaaagtttg agctcatcga ccccttggct 960
 cagcaattca ataacctcca cgtcgcttcg attctcaaat tttgcaaaac tgaaggatat 1020
 cttattgtgg gaatggatgg tccagatgca cttgaagaca gttttcctat tcatatcaat 1080
 aatacatfita tgttcccagt tggttatgcy gaaaagtata atttggaact tgttccgcca 1140
 gatgagttca aaggaacatt cagatgggat gaatacttgg agaaagaatc tgcagaaacc 1200
 ctaccgcttg acttggtcaa gccaatgcct tcccaagaga gattagacaa atttaaggta 1260
 attctgattt ccaaacgggt aggactacgc cttgaagctg ctgacatgtg tgaaaatcag 1320
 tttatttgtc cagctacagt gaaatcagtt catggaagac tgataaatgt caatttcgac 1380
 ggctgggatg aagaatttga tgaactgtat gatgtggact cccatgatat tctaccgata 1440
 ggatggtgtg aagcgcacag ttatgttcta caacctccga aaaagtacaa ctattga 1497

<210> 7
 <211> 100
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> derived from Caenorhabditis elegans, Drosophila melanogaster, Mus musculus and Homo sapiens

<400> 7
Phe Asp Trp Glu Asp Tyr Leu Glu Glu Thr Gly Ala Arg Ala Ala Pro
1 5 10 15
Val Glu Leu Phe Asp Lys Gln Pro Val Asp Ser Pro Pro Asn Gly Phe
20 25 30
Lys Val Gly Met Lys Leu Glu Ala Val Asp Pro Arg Asn Pro Ser Leu
35 40 45
Ile Cys Val Ala Thr Val Val Glu Val Lys Gly Tyr Arg Leu Leu Leu
50 55 60
His Phe Asp Gly Trp Asp Asp Arg Tyr Asp Phe Trp Cys Asp Ala Asp
65 70 75 80
Ser Pro Asp Ile Phe Pro Val Gly Trp Cys Glu Lys Asn Gly His Pro
85 90 95
Leu Gln Pro Pro
100

<210> 8
<211> 100
<212> PRT
<213> Drosophila melanogaster

<400> 8
Trp Ser Trp Glu Ser Tyr Leu Glu Glu Gln Lys Ala Ile Thr Ala Pro
1 5 10 15
Val Ser Leu Phe Asp Ser Gln Ala Val Thr His Asn Lys Asn Gly Phe
20 25 30
Lys Leu Gly Met Lys Leu Glu Gly Ile Asp Pro Gln His Pro Ser Met
35 40 45
Tyr Phe Ile Leu Thr Val Ala Glu Val Cys Gly Tyr Arg Leu Arg Leu
50 55 60
His Phe Asp Gly Tyr Ser Glu Cys His Asp Phe Trp Val Asn Ala Asn
65 70 75 80
Ser Pro Asp Ile His Pro Ala Gly Trp Phe Glu Lys Thr Gly His Lys
85 90 95
Leu Gln Leu Pro
100

<210> 9
<211> 100
<212> PRT
<213> Drosophila melanogaster

<400> 9
Phe Ser Trp Ser Gln Tyr Met Cys Ser Thr Arg Ala Gln Ala Ala Pro
1 5 10 15
Lys His Met Phe Val Ser Gln Ser His Ser Pro Pro Pro Leu Gly Phe
20 25 30
Gln Val Gly Met Lys Leu Glu Ala Val Asp Arg Met Asn Pro Ser Leu
35 40 45
Val Cys Val Ala Ser Val Thr Asp Val Val Asp Ser Arg Phe Leu Val
50 55 60
His Phe Asp Asn Trp Asp Asp Thr Tyr Asp Tyr Trp Cys Asp Pro Ser
65 70 75 80
Ser Pro Tyr Ile His Pro Val Gly Trp Cys Gln Lys Gln Gly Lys Pro
85 90 95
Leu Thr Pro Pro
100

<210> 10
 <211> 96
 <212> PRT
 <213> Drosophila melanogaster

<400> 10
 Phe Cys Trp Glu Lys Tyr Leu Glu Glu Thr Gly Ala Ser Ala Val Pro
 1 5 10 15
 Thr Trp Ala Phe Lys Val Arg Pro Pro His Ser Phe Leu Val Asn Met
 20 25 30
 Lys Leu Glu Ala Val Asp Arg Arg Asn Pro Ala Leu Ile Arg Val Ala
 35 40 45
 Ser Val Glu Asp Val Glu Asp His Arg Ile Lys Ile His Phe Asp Gly
 50 55 60
 Trp Ser His Gly Tyr Asp Phe Trp Ile Asp Ala Asp His Pro Asp Ile
 65 70 75 80
 His Pro Ala Gly Trp Cys Ser Lys Thr Gly His Pro Leu Gln Pro Pro
 85 90 95

<210> 11
 <211> 99
 <212> PRT
 <213> Drosophila melanogaster

<400> 11
 Phe Arg Trp Ser Glu Tyr Leu Ser Lys Gly Lys Asp Val Ala Ala Pro
 1 5 10 15
 Ile His Leu Phe Leu Asn Pro Phe Pro Ile Ser Pro Asn Cys Phe Glu
 20 25 30
 Ile Gly Met Lys Leu Glu Ala Ile Asp Pro Glu Asn Cys Ser Leu Phe
 35 40 45
 Cys Val Cys Ser Ile Val Glu Val Arg Gly Tyr Arg Leu Lys Leu Ser
 50 55 60
 Phe Asp Gly Tyr Ser Ser Met Tyr Asp Phe Trp Val Asn Ala Asp Ser
 65 70 75 80
 Gln Asp Ile Phe Pro Gly Trp Cys Asp Glu Thr Ala Arg Val Leu
 85 90 95
 Gln Ala Pro

<210> 12
 <211> 100
 <212> PRT
 <213> Drosophila melanogaster

<400> 12
 Phe Ser Trp Ser Arg Tyr Leu Val Lys Thr Gly Gly Lys Ala Ala Pro
 1 5 10 15
 Arg Ala Leu Phe Asn Met Gln Gln Gln Met Asp Val Arg Asn Gly Phe
 20 25 30
 Ala Val Gly Met His Leu Glu Ala Glu Asp Leu Asn Asp Thr Gly Lys
 35 40 45
 Ile Cys Val Ala Thr Val Thr Asp Ile Leu Asp Glu Arg Ile Arg Val
 50 55 60
 His Phe Asp Gly Trp Asp Asp Cys Tyr Asp Leu Trp Val His Ile Thr
 65 70 75 80

Ser Pro Tyr Ile His Pro Cys Gly Trp His Glu Gly Arg Gln Gln Leu
85 90 95
Ile Val Pro Pro
100

<210> 13
<211> 96
<212> PRT
<213> Drosophila melanogaster

<400> 13
Phe Ile Trp Asp Asp Tyr Ile Ser Glu Val Gly Gly Met Ala Ala Ser
1 5 10 15
Lys Glu Leu Phe Thr Pro Arg Gln Pro Met Glu Tyr Gln Glu Arg Met
20 25 30
Lys Leu Glu Val Val Asp Gln Arg Asn Pro Cys Leu Ile Arg Pro Ala
35 40 45
Thr Val Val Thr Arg Lys Gly Tyr Arg Val Gln Leu His Leu Asp Cys
50 55 60
Trp Pro Thr Glu Tyr Tyr Phe Trp Leu Glu Asp Asp Ser Pro Asp Leu
65 70 75 80
His Pro Ile Gly Trp Cys Glu Ala Thr Ser His Glu Leu Glu Thr Pro
85 90 95

<210> 14
<211> 99
<212> PRT
<213> Mus musculus

<400> 14
Phe Thr Trp Asp Lys Tyr Leu Lys Glu Thr Cys Ser Val Pro Ala Pro
1 5 10 15
Val His Cys Phe Lys Gln Ser Tyr Thr Pro Pro Ser Asn Glu Phe Lys
20 25 30
Ile Ser Met Lys Leu Glu Ala Gln Asp Pro Arg Asn Thr Thr Ser Thr
35 40 45
Cys Ile Ala Thr Val Val Gly Leu Thr Gly Ala Arg Leu Arg Leu Arg
50 55 60
Leu Asp Gly Ser Asp Asn Lys Asn Asp Phe Trp Arg Leu Val Asp Ser
65 70 75 80
Ser Glu Ile Gln Pro Ile Gly Asn Cys Glu Lys Asn Gly Gly Met Leu
85 90 95
Gln Pro Pro

<210> 15
<211> 100
<212> PRT
<213> Homo sapiens

<400> 15
Ser Ser Trp Pro Met Phe Leu Thr Leu Asn Gly Ser Glu Met Ala Ser
1 5 10 15
Ala Thr Leu Phe Lys Lys Glu Pro Pro Lys Pro Pro Leu Asn Asn Phe
20 25 30
Lys Val Gly Met Lys Leu Glu Ala Ile Asp Lys Lys Asn Pro Tyr Leu


```

ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgta ctttttagtgc 900
tcagccggcg ccggcgccag ttagagagggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccgcccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgcccg agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcttggcggt tgatcagaag gaatacgccg atgttgggga 1140
tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacagggtgct tgtttaaaaa 1260
aaaaaaaaa aaaaaa 1276

```

```

<210> 19
<211> 386
<212> PRT
<213> Caenorhabditis elegans

```

```

<400> 19
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1          5          10          15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
 20          25          30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
 35          40          45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
 50          55          60
Lys Lys Val Met Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
 65          70          75          80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
 85          90          95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
 100         105         110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
 115         120         125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
 130         135         140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
 145         150         155         160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
 165         170         175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
 180         185         190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
 195         200         205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
 210         215         220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
 225         230         235         240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
 245         250         255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
 260         265         270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
 275         280         285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
 290         295         300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
 305         310         315         320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
 325         330         335
Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
 340         345         350

```

Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
 355 360 365
 Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
 370 375 380
 Asn Ser
 385

<210> 20
 <211> 1276
 <212> DNA
 <213> Caenorhabditis elegans

<400> 20
 agaatctgcc aaaatgtcaa agataaaagac acattccact ggctcaaaac ggacggtacc 60
 attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccacccg atccaacccg 120
 gtactttctcg acggaaaagt acatcgccact gagcaaagat gagaaattca aattttgatga 180
 ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgcc 240
 ggatatttag agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
 tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
 atgcggaaa gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggccttac 420
 accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
 tcgagactat acacaacgct gggaggccga cttgttgaaa gatttgagcg tgggtgctcgg 540
 gctcgaggct cggcgagcat cgaaaaatat ggaaaagggtg gattctgggg agctcatgga 600
 gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
 ggagacaggg tccaattgga gcgatccggc gccggaacca tccaatcca aatcccagtc 720
 cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
 tgacgatttc tatcaagagg aacatgaatc cgcatacaaac gccatgtatc ggatcgcttt 840
 ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca ctttttagtgc 900
 tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atggttagttc 960
 atcgagtttc accccgaagc ccccgccat gatcaacaat ttggtgagg agatgaacca 1020
 aataacatac caagcgatcc gtattgccc agagcagccg gaacgtctga aattgctccg 1080
 taaggcactt ttcgacgttg tcctggcggt tgatcagaag gaatacgccg atgttgggga 1140
 tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
 ttaattttatt tcaatttttg ttacatgttc caatataata aacagggtgct tgtttaaaaa 1260
 aaaaaaaaaa aaaaaa 1276

<210> 21
 <211> 78
 <212> PRT
 <213> Caenorhabditis elegans

<400> 21
 Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1 5 10 15
 Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
 20 25 30
 Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
 35 40 45
 Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
 50 55 60
 Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile
 65 70 75

<210> 22
 <211> 1276
 <212> DNA
 <213> Caenorhabditis elegans

<400> 22

```

agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccacccg atccaacccg 120
gtacttctcg acggaaaagt acatcgact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtgggtgctc aacgagattg gcaagtgcc 240
ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag gggtgctgtt gtctatcaaa tcgctgaaat aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttgagcg tgggtgctcg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaagggtg gattctgggg agctcatgga 600
gcccattggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatacaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgta cttttagtg 900
tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc acccgaagc ccccgcccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgccc agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcggt tgatcagaag gaatacgccg atgttgggga 1140
tttgtagagg gatttggcg caaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacagggtgct tgtttaaaaa 1260
aaaaaaaaa aaaaaa 1276

```

<210> 23

<211> 112

<212> PRT

<213> *Caenorhabditis elegans*

<400> 23

```

Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
1          5          10          15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
20          25          30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
35          40          45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
50          55          60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65          70          75          80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
85          90          95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
100          105          110

```

<210> 24

<211> 1276

<212> DNA

<213> *Caenorhabditis elegans*

<400> 24

```

agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccacccg atccaacccg 120
gtacttctcg acggaaaagt acatcgact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtgggtgctc aacgagattg gcaagtgcc 240
ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag gggtgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcacgtggca attgtaagca agcggcttac 420

```

```

accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tgggtgctcg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaagggtg gatttctgggg agctcatgga 600
gcccattggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcacaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgta cttttagtgc 900
tcagccggcg cggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccgcccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgccc agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcgtt tgatcagaag gaatacgccg atgttgggga 1140
tttgtagagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
aaaaaaaaa aaaaaa 1276

```

```

<210> 25
<211> 386
<212> PRT
<213> Caenorhabditis elegans

```

```

<400> 25
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
1          5          10          15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
20          25          30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
35          40          45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
50          55          60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65          70          75          80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
85          90          95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
100         105         110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu His Val
115         120         125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
130         135         140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145         150         155         160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
165         170         175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
180         185         190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
195         200         205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
210         215         220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225         230         235         240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
245         250         255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
260         265         270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
275         280         285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg

```

290		295		300
Glu Ala Pro Ser Pro Val	Val Glu Asn Val Ser	Ser Ser Ser Phe Thr		
305	310	315		320
Pro Lys Pro Pro Ala Met	Ile Asn Asn Phe Gly	Glu Glu Met Asn Gln		
	325	330		335
Ile Thr Tyr Gln Ala Ile	Arg Ile Ala Arg Glu	Gln Pro Glu Arg Leu		
	340	345		350
Lys Leu Leu Arg Lys Ala	Leu Phe Asp Val Val	Leu Ala Phe Asp Gln		
	355	360		365
Lys Glu Tyr Ala Asp Val	Gly Asp Leu Tyr Arg	Asp Leu Ala Gln Lys		
	370	375		380
Asn Ser				
385				

<210> 26
 <211> 1276
 <212> DNA
 <213> Caenorhabditis elegans

<400> 26

agaatctgcc	aaaatgtcaa	agataaagac	acattccact	ggctcaaaac	ggacggtacc	60
attctacaag	ctgccaccgc	ccgtgccact	tccaccactc	ccgccacccg	atccaacccg	120
gtacttctcg	acggaaaagt	acatcgccact	gagcaaagat	gagaaattca	aatttgatga	180
ttacgatgtg	aatgatgaga	cgctgaaaaa	agtgggtgctc	aacgagattg	gcaagtgtccc	240
ggatatttgg	agctcgcgga	gccaggcagc	cattatggag	cactatccga	ttgttgcaac	300
tgaaacgtac	aggaggacag	ggttgctgtt	gtctatcaaa	tcgctgaaac	aaatctacaa	360
atgcggaaag	gacaatctcc	gaaaccgggt	tcgcgtggca	attgtaagca	agcggcttac	420
accggcccaa	gtagaggcct	atatgtggca	ctgggagttt	tacggcttta	ttcgctacta	480
tcgagactat	acacaacgct	gggaggccga	cttgttgaaa	gatttggacg	tggtgtctcg	540
gctcgaggct	cggcgagcat	cgaaaaatat	ggaaaagggtg	gattctgggg	agctcatgga	600
gcccattggag	cccatggatt	ctacaatgga	tgagatgtgc	gtcgaggagg	agccctacga	660
ggagacaggg	tccaattgga	gcgatccggc	gccggaacca	tccaatcca	aatcccagtc	720
cccagaagcc	aagtaccctc	aagcctacct	actacctgag	gcggacgaag	tctacaatcc	780
tgacgatttc	tatcaagagg	aacatgaatc	cgcatacaac	gccatgtatc	ggatcgcttt	840
ctcacagcag	tacggtggcg	gcgggtcccc	agccgtgcag	aagcccgtca	cttttagtgc	900
tcagccggcg	ccggcgccag	ttagagaggc	cccaagccca	gttgtggaga	atgttagttc	960
atcgagtttc	accccgaagc	ccccggccat	gatcaacaat	tttggtgagg	agatgaacca	1020
aataacatac	caagcgatcc	gtattgcccg	agagcagccg	gaacgtctga	aattgtctccg	1080
taaggcactt	ttcgacgttg	tcctggcggt	tgatcagaag	gaatacgccg	atgttgggga	1140
tttgtacagg	gatttggcgc	aaaagaattc	gtgataattt	ttttttgagt	tttttaattt	1200
ttaatttatt	tcaatttttg	ttacatgttc	caatataata	aacaggtgct	tgtttaaaaa	1260
aaaaaaaaaa	aaaaaa					1276

<210> 27
 <211> 386
 <212> PRT
 <213> Caenorhabditis elegans

<400> 27

Met Ser Lys Ile Lys Thr	His Ser Thr Gly Ser	Lys Arg Thr Val Pro
1	5	10
Phe Tyr Lys Leu Pro Pro	Pro Val Pro Leu Pro	Pro Leu Pro Pro Pro
20	25	30
Asp Pro Thr Arg Tyr Phe	Ser Thr Glu Lys Tyr	Ile Ala Leu Ser Lys
35	40	45
Asp Glu Lys Phe Lys Phe	Asp Tyr Asp Val	Asn Asp Glu Thr Leu
50	55	60
Lys Lys Val Val Leu Asn	Glu Ile Gly Lys Cys	Pro Asp Ile Trp Ser

65					70					75				80
Ser	Arg	Ser	Gln	Ala	Ala	Ile	Met	Glu	His	Tyr	Pro	Ile	Val	Ala
				85					90					95
Glu	Thr	Tyr	Arg	Arg	Thr	Gly	Leu	Leu	Leu	Ser	Ile	Lys	Ser	Leu
			100					105					110	
Gln	Ile	Tyr	Lys	Cys	Gly	Lys	Asp	Asn	Leu	Arg	Asn	Arg	Leu	Arg
		115					120					125		
Ala	Ile	Val	Ser	Lys	Arg	Leu	Thr	Pro	Ala	Gln	Val	Glu	Ala	Tyr
	130						135				140			
Trp	His	Trp	Glu	Phe	Tyr	Gly	Phe	Ile	Arg	Tyr	Tyr	Arg	Asp	Tyr
	145				150					155				160
Gln	Arg	Trp	Glu	Ala	Asp	Leu	Leu	Lys	Asp	Leu	Asp	Val	Val	Leu
			165						170					175
Leu	Glu	Ala	Arg	Arg	Ala	Ser	Lys	Asn	Met	Glu	Lys	Val	Asp	Ser
		180						185					190	
Glu	Leu	Met	Glu	Pro	Met	Glu	Pro	Met	Asp	Ser	Thr	Met	Asp	Glu
	195						200					205		
Cys	Val	Glu	Glu	Glu	Pro	Tyr	Glu	Glu	Thr	Gly	Ser	Asn	Trp	Ser
	210					215					220			
Pro	Ala	Pro	Glu	Pro	Ser	Gln	Ser	Lys	Ser	Gln	Ser	Pro	Glu	Ala
	225				230					235				Lys
Tyr	Pro	Gln	Ala	Tyr	Leu	Leu	Pro	Glu	Ala	Asp	Glu	Val	Tyr	Asn
			245						250					255
Asp	Asp	Phe	Tyr	Gln	Glu	Glu	His	Glu	Ser	Ala	Ser	Asn	Ala	Met
		260						265					270	
Arg	Ile	Ala	Phe	Ser	Gln	Gln	Tyr	Gly	Gly	Gly	Gly	Ser	Pro	Ala
	275						280					285		
Gln	Lys	Pro	Val	Thr	Phe	Ser	Ala	Gln	Pro	Ala	Pro	Ala	Pro	Val
	290					295					300			
Glu	Ala	Pro	Ser	Pro	Val	Val	Glu	Asn	Val	Ser	Ser	Ser	Ser	Phe
	305				310				315					320
Pro	Lys	Pro	Pro	Ala	Met	Ile	Asn	Asn	Phe	Gly	Glu	Glu	Met	Asn
			325						330					335
Ile	Thr	Tyr	Gln	Ala	Ile	Arg	Ile	Ala	Arg	Glu	Gln	Pro	Glu	Arg
		340					345						350	
Lys	Leu	Leu	Arg	Lys	Ala	Leu	Phe	Asp	Val	Val	Leu	Ala	Phe	Asp
	355					360					365			Gln
Lys	Glu	Tyr	Ala	Asp	Val	Gly	Asp	Leu	Tyr	Arg	Asp	Leu	Ala	Gln
	370				375						380			Lys
Asn	Ser													
385														

<210> 28
 <211> 1276
 <212> DNA
 <213> Caenorhabditis elegans

<400> 28
 agaatctgcc aaaatgtcaa agataaaagac acattccact ggctcaaaac ggacggtacc 60
 attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccacccg atccaacccg 120
 gtacttctcg acggaaaagt acatcgact gagcaaagat gagaaattca aatttgatga 180
 ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgcc 240
 ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
 tgaaacgtac aggaggacag gggtgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
 atgcggaag gacaatctcc gaaaccggct tcgctggca attgtaagca agcggcttac 420
 accggcccaa gtagaggcct atatgtggcg ctgagagttt tacggcttta ttcgctacta 480
 tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tgggtgctcg 540
 gctcgaggct cggcgagcat cgaaaaatat ggaaaagggtg gattctgggg agctcatgga 600


```

gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcacaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgta cttttagtc 900
tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccgccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgccc agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcttggcgtt tgatcagaag gaatacgccg atgttgggga 1140
tttgtagagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
aaaaaaaaa aaaaaa 1276

```

<210> 29
 <211> 146
 <212> PRT
 <213> Caenorhabditis elegans

```

<400> 29
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
1          5          10          15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro
20          25          30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
35          40          45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
50          55          60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
65          70          75          80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
85          90          95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Ser Ile Lys Ser Leu Lys
100         105         110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
115         120         125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
130         135         140
Trp Arg
145

```

<210> 30
 <211> 1276
 <212> DNA
 <213> Caenorhabditis elegans

```

<400> 30
agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccaccgc atccaaccgc 120
gtacttctcg acggaaaagt acatcgccact gagcaaagat gagaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgcc 240
ggatatattg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgtgtgt gtctatcaaa tcgctgaaac aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
accggcccaa gtagaggcct atatgtggcg ctggaagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttgagcg tgggtgctcg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaagggt gattctgggg agctcatgga 600
gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720

```

```

cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcacaaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgta ctttttagtgc 900
tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccgccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgccc agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcggt tgatcagaag gaatacgccg atgttgggga 1140
tttgtagagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
aaaaaaaaa aaaaaa 1276

```

```

<210> 31
<211> 386
<212> PRT
<213> Caenorhabditis elegans

```

```

<400> 31
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
  1          5          10          15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
  20          25          30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
  35          40          45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
  50          55          60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
  65          70          75          80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
  85          90          95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Ser Ile Lys Ser Leu Lys
  100         105         110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
  115         120         125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
  130         135         140
Trp Arg Trp Lys Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
  145         150         155         160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
  165         170         175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
  180         185         190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
  195         200         205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
  210         215         220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
  225         230         235         240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
  245         250         255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
  260         265         270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
  275         280         285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
  290         295         300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
  305         310         315         320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
  325         330         335

```

Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
 340 345 350
 Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
 355 360 365
 Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
 370 375 380
 Asn Ser
 385

<210> 32
 <211> 1276
 <212> DNA
 <213> Caenorhabditis elegans

<400> 32
 agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
 attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccaccgc atccaaccgc 120
 gtacttctcg acggaaaagt acatcgcaact gagcaaagat gagaaaattca aatttgatga 180
 ttacgatgtg aatgatgaga cgctgaaaaa agtgggtgctc aacgagattg gcaagtgtccc 240
 ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
 tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
 atgcggaaaag gacaatctcc gaaaccggct tcgctgggca attgtaagca agcggcttac 420
 accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttgtacta 480
 tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tgggtgctcgg 540
 gctcgaggct cggcgagcat cgaaaaatat ggaaaaggtg gattctgggg agctcatgga 600
 gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
 ggagacaggg tccaattgga gcgatccggc gccggaacca tccaatcca aatcccagtc 720
 cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
 tgacgatttc tatcaagagg aacatgaatc cgcatacaac gccatgtatc ggatcgcttt 840
 ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgta cttttagtgc 900
 tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
 atcgagtttc accccgaagc ccccgcccat gatcaacaat tttggtgagg agatgaacca 1020
 aataacatac caagcgatcc gtattgccc agagcagccg gaacgtctga aattgctccg 1080
 taaggcactt ttcgacgttg tctggcggt tgatcagaag gaatacgccg atgttgggga 1140
 tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
 ttaatttatt tcaatttttg ttacatgttc caatataata aacagggtgct tgtttaaaaa 1260
 aaaaaaaaaa aaaaaa 1276

<210> 33
 <211> 386
 <212> PRT
 <213> Caenorhabditis elegans

<400> 33
 Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1 5 10 15
 Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
 20 25 30
 Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
 35 40 45
 Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
 50 55 60
 Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
 65 70 75 80
 Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
 85 90 95
 Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
 100 105 110


```

tcagccggcg cccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccgcccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgcccg agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcggt tgatcagaag gaatacgccg atgttgggga 1140
tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacagggtgct tgtttaaaaa 1260
aaaaaaaaa aaaaaa 1276

```

<210> 35
 <211> 162
 <212> PRT
 <213> *Caenorhabditis elegans*

```

<400> 35
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1          5          10          15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
 20          25          30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
 35          40          45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
 50          55          60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
 65          70          75          80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
 85          90          95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
 100         105         110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
 115         120         125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
 130         135         140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
 145         150         155         160
Gln Arg

```

<210> 36
 <211> 1276
 <212> DNA
 <213> *Caenorhabditis elegans*

```

<400> 36
agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccacccg atccaacccg 120
gtacttctcg acggaaaagt acatcgccact gagcaaagat gagaaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgtccc 240
ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaacgtac aggaggacag gggttgctgt gtctatcaaa tcgctgaaac aaatctacaa 360
atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggccttac 420
accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct ggaaggccga cttgttgaaa gatttggacg tgggtgctcgg 540
gctcgaggct cggcgagcat cgaaaaatat ggaaaagggtg gattctgggg agctcatgga 600
gcccattggag cccattggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacaggg tccaattgga gcatccggc gccggaacca tccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcatacaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca ctttttagtgc 900

```

```

tcagccggcg cccggcgccag ttagagagggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccggccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgcccg agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcggtt tgatcagaag gaatacgccg atgttgggga 1140
ttgttacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
aaaaaaaaa aaaaaa 1276

```

<210> 37
 <211> 386
 <212> PRT
 <213> *Caenorhabditis elegans*

```

<400> 37
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1          5          10          15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
 20          25          30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
 35          40          45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
 50          55          60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
 65          70          75          80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
 85          90          95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
 100         105         110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
 115         120         125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
 130         135         140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
 145         150         155         160
Gln Arg Trp Lys Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
 165         170         175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
 180         185         190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
 195         200         205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
 210         215         220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
 225         230         235         240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
 245         250         255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
 260         265         270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
 275         280         285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
 290         295         300
Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
 305         310         315         320
Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
 325         330         335
Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Glu Gln Pro Glu Arg Leu
 340         345         350
Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln

```

355 360 365
 Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
 370 375 380
 Asn Ser
 385

<210> 38
 <211> 1275
 <212> DNA
 <213> Caenorhabditis elegans

<400> 38
 agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
 attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccaccgc atccaaccgc 120
 gtactttctcg acggaaaagt acatcgccact gagcaaagat gagaaaattca aatttgatga 180
 ttacgatgtg aatgatgaga cgctgaaaaa agtgggtgctc aacgagattg gcaagtgtccc 240
 ggatattttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
 tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
 atgcggaaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcgggcttac 420
 accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
 tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tgggtgctcgg 540
 gctcgaggct cggcgagcat cgaaaaatat ggaaaagtgg attctgggga gctcatggag 600
 cccatggagc ccatggattc tacaatggat gagatgtgcg tcgaggagga gccctacgag 660
 gagacagggc ccaattggag cgatccggcg ccggaaccat cccaatccaa atcccagtc 720
 ccagaagcca agtaccctca agcctaccta ctacctgagg cggacgaagt ctacaatcct 780
 gacgatttct atcaagagga acatgaatcc gcatcaaacg ccatgtatcg gatcgctttc 840
 tcacagcagt acggtggcgg cgggtcccca gccgtgcaga agcccgtcac ttttagtgct 900
 cagccggcgc cggcgccagt tagagaggcc ccaagcccag ttgtggagaa tgttagttca 960
 tcgagtttca ccccggaagcc cccggccatg atcaacaatt ttggtgagga gatgaaccaa 1020
 ataacatacc aagcgatccg tattgcccga gagcagccgg aacgtctgaa attgctccgt 1080
 aaggcacttt tcgacgttgt cctggcggtt gatcagaagg aatacgccga tgttggggat 1140
 ttgtacaggg atttggcgca aaagaattcg tgataatttt tttttgagtt ttttaatttt 1200
 taattttatt caatttttgt tacatgttcc aatataataa acaggtgctt gtttaaaaaa 1260
 aaaaaaaaaa aaaaaa 1275

<210> 39
 <211> 325
 <212> PRT
 <213> Caenorhabditis elegans

<400> 39
 Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1 5 10 15
 Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
 20 25 30
 Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
 35 40 45
 Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
 50 55 60
 Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
 65 70 75 80
 Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
 85 90 95
 Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
 100 105 110
 Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
 115 120 125
 Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met

130	135	140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr		
145	150	155
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly		
	165	170
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Trp Ile Leu Gly		
	180	185
Ser Ser Trp Ser Pro Trp Ser Pro Trp Ile Leu Gln Trp Met Arg Cys		
	195	200
Ala Ser Arg Arg Ser Pro Thr Arg Arg Gln Gly Pro Ile Gly Ala Ile		
	210	215
Arg Arg Arg Asn His Pro Asn Pro Asn Pro Ser Pro Gln Lys Pro Ser		
225	230	235
Thr Leu Lys Pro Thr Tyr Tyr Leu Arg Arg Thr Lys Ser Thr Ile Leu		
	245	250
Thr Ile Ser Ile Lys Arg Asn Met Asn Pro His Gln Thr Pro Cys Ile		
	260	265
Gly Ser Leu Ser His Ser Ser Thr Val Ala Ala Gly Pro Gln Pro Cys		
	275	280
Arg Ser Pro Ser Leu Leu Val Leu Ser Arg Arg Arg Arg Gln Leu Glu		
	290	295
Arg Pro Gln Ala Gln Leu Trp Arg Met Leu Val His Arg Val Ser Pro		
305	310	315
Arg Ser Pro Arg Pro		
	325	

<210> 40
 <211> 1276
 <212> DNA
 <213> Caenorhabditis elegans

<400> 40
 agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacgggtacc 60
 attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccaccgc atccaaccgc 120
 gtacttctcg acggaaaagt acatcgccact gagcaaagat gagaaattca aatttgatga 180
 ttacgatgtg aatgatgaga cgctgaaaaa agtggtgctc aacgagattg gcaagtgtcc 240
 ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
 tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
 atgcggaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
 accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
 tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tgggtgctcg 540
 gctcgaggct cggcgagcat cgaaaaatat ggaaaagggtg gattctgggg agctcatgga 600
 gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
 ggagacaggg tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
 cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
 tgacgatttc tatcaagagg aacatgaatc cgcatacaac gccatgtatc ggatcgcttt 840
 ctcacagtag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca cttttagtgc 900
 tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
 atcgagtttc accccgaagc ccccgcccat gatcaacaat tttggtgagg agatgaacca 1020
 aataacatac caagcgatcc gtattgcccc agagcagccg gaacgtctga aattgctccg 1080
 taaggcactt ttcgacgttg tctggtcggt tgatcagaag gaatacgccg atgttgggga 1140
 tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
 ttaatttatt tcaatttttg ttacatgttc caatataata aacagggtgct tgtttaaaaa 1260
 aaaaaaaaaa aaaaaa 1276

<210> 41
 <211> 278
 <212> PRT

<213> Caenorhabditis elegans

<400> 41

Met	Ser	Lys	Ile	Lys	Thr	His	Ser	Thr	Gly	Ser	Lys	Arg	Thr	Val	Pro
1				5					10					15	
Phe	Tyr	Lys	Leu	Pro	Pro	Pro	Val	Pro	Leu	Pro	Pro	Leu	Pro	Pro	Pro
			20					25					30		
Asp	Pro	Thr	Arg	Tyr	Phe	Ser	Thr	Glu	Lys	Tyr	Ile	Ala	Leu	Ser	Lys
		35					40					45			
Asp	Glu	Lys	Phe	Lys	Phe	Asp	Asp	Tyr	Asp	Val	Asn	Asp	Glu	Thr	Leu
	50					55					60				
Lys	Lys	Val	Val	Leu	Asn	Glu	Ile	Gly	Lys	Cys	Pro	Asp	Ile	Trp	Ser
65					70					75				80	
Ser	Arg	Ser	Gln	Ala	Ala	Ile	Met	Glu	His	Tyr	Pro	Ile	Val	Ala	Thr
			85					90					95		
Glu	Thr	Tyr	Arg	Arg	Thr	Gly	Leu	Leu	Leu	Ser	Ile	Lys	Ser	Leu	Lys
			100					105					110		
Gln	Ile	Tyr	Lys	Cys	Gly	Lys	Asp	Asn	Leu	Arg	Asn	Arg	Leu	Arg	Val
	115						120					125			
Ala	Ile	Val	Ser	Lys	Arg	Leu	Thr	Pro	Ala	Gln	Val	Glu	Ala	Tyr	Met
	130						135					140			
Trp	Arg	Trp	Glu	Phe	Tyr	Gly	Phe	Ile	Arg	Tyr	Tyr	Arg	Asp	Tyr	Thr
145				150						155					160
Gln	Arg	Trp	Glu	Ala	Asp	Leu	Leu	Lys	Asp	Leu	Asp	Val	Val	Leu	Gly
			165						170					175	
Leu	Glu	Ala	Arg	Arg	Ala	Ser	Lys	Asn	Met	Glu	Lys	Val	Asp	Ser	Gly
			180					185					190		
Glu	Leu	Met	Glu	Pro	Met	Glu	Pro	Met	Asp	Ser	Thr	Met	Asp	Glu	Met
	195						200					205			
Cys	Val	Glu	Glu	Glu	Pro	Tyr	Glu	Glu	Thr	Gly	Ser	Asn	Trp	Ser	Asp
	210					215						220			
Pro	Ala	Pro	Glu	Pro	Ser	Gln	Ser	Lys	Ser	Gln	Ser	Pro	Glu	Ala	Lys
225					230					235					240
Tyr	Pro	Gln	Ala	Tyr	Leu	Leu	Pro	Glu	Ala	Asp	Glu	Val	Tyr	Asn	Pro
			245						250					255	
Asp	Asp	Phe	Tyr	Gln	Glu	Glu	His	Glu	Ser	Ala	Ser	Asn	Ala	Met	Tyr
			260					265					270		
Arg	Ile	Ala	Phe	Ser	Gln										
			275												

<210> 42

<211> 1276

<212> DNA

<213> Caenorhabditis elegans

<400> 42

agaatctgcc	aaaatgtcaa	agataaagac	acattccact	ggctcaaaac	ggacggtacc	60
attctacaag	ctgccaccgc	ccgtgccact	tccaccactc	ccgccacccg	atccaacccg	120
gtacttctcg	acggaaaagt	acatcgccact	gagcaaagat	gagaaaattca	aatttgatga	180
ttacgatgtg	aatgatgaga	cgctgaaaaa	agtgggtgctc	aacgagattg	gcaagtgtccc	240
ggatatttgg	agctcgcgga	gccaggcagc	cattatggag	cactatccga	ttgttgcaac	300
tgaacgtac	aggaggacag	ggttgctgtt	gtctatcaaa	tcgctgaaac	aaatctacaa	360
atgcggaaag	gacaatctcc	gaaaccggct	tcgcgtggca	attgtaagca	agcggcttac	420
accggcccaa	gtagaggcct	atatgtggcg	ctgggagttt	tacggcttta	ttcgctacta	480
tcgagactat	acacaacgct	gggaggccga	cttggtgaaa	gatttgagcg	tggtgctcgg	540
gctcgaggct	cggcgagcat	cgaaaaatat	ggaaaagggtg	gattctgggg	agctcatgga	600
gcccatggag	cccatggatt	ctacaatgga	tgagatgtgc	gtcgaggagg	agccctacga	660
ggagacaggg	tccaattgga	gcgatccggc	gccggaacca	tccaatcca	aatcccagtc	720

```

cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcaccaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacgggtggcg gcgggtcccc agccgtgcag aagcccgta ctttttagtgc 900
tcagccggcg ccggcgccag tttgagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccgccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac caagcgatcc gtattgccc agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tcctggcggt tgatcagaag gaatacgccg atgttgggga 1140
tttgtagagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacaggtgct tgtttaaaaa 1260
aaaaaaaaa aaaaaa 1276

```

<210> 43
 <211> 303
 <212> PRT
 <213> *Caenorhabditis elegans*

```

<400> 43
Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1          5          10          15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
 20          25          30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
 35          40          45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
 50          55          60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
 65          70          75          80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
 85          90          95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Ser Ile Lys Ser Leu Lys
100          105          110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
115          120          125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
130          135          140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
145          150          155          160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
165          170          175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
180          185          190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
195          200          205
Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
210          215          220
Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
225          230          235          240
Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
245          250          255
Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
260          265          270
Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
275          280          285
Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val
290          295          300

```

<210> 44
 <211> 1276

<212> DNA
 <213> Caenorhabditis elegans

<400> 44

```

agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccacccg atccaacccg 120
gtactttctcg acggaaaagt acatcgccact gagcaaagat gagaaaattca aatttgatga 180
ttacgatgtg aatgatgaga cgctgaaaaa agtgggtgctc aacgagattg gcaagtgtccc 240
ggatattttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
atgcggaaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggccttac 420
accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tgggtgctcgg 540
gtctgagggt cggcgagcat cgaaaaatat ggaaaagggtg gattctgggg agctcatgga 600
gcccattggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
ggagacagggt tccaattgga gcgatccggc gccggaacca tcccaatcca aatcccagtc 720
cccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
tgacgatttc tatcaagagg aacatgaatc cgcacaaac gccatgtatc ggatcgcttt 840
ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca ctttttagtgc 900
tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
atcgagtttc accccgaagc ccccggccat gatcaacaat tttggtgagg agatgaacca 1020
aataacatac taagcgatcc gtattgcccg agagcagccg gaacgtctga aattgctccg 1080
taaggcactt ttcgacgttg tctggcggtt tgatcagaag gaatacgccg atgttgggga 1140
tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
ttaatttatt tcaatttttg ttacatgttc caatataata aacagggtgct tgtttaaaaa 1260
aaaaaaaaaa aaaaaa                                     1276
  
```

<210> 45
 <211> 339
 <212> PRT
 <213> Caenorhabditis elegans

<400> 45

```

Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
  1          5          10          15
Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
  20          25          30
Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
  35          40          45
Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
  50          55          60
Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
  65          70          75          80
Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
  85          90          95
Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
 100          105          110
Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
 115          120          125
Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
 130          135          140
Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
 145          150          155          160
Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
 165          170          175
Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
 180          185          190
Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
 195          200          205
  
```

Cys	Val	Glu	Glu	Glu	Pro	Tyr	Glu	Glu	Thr	Gly	Ser	Asn	Trp	Ser	Asp
210						215					220				
Pro	Ala	Pro	Glu	Pro	Ser	Gln	Ser	Lys	Ser	Gln	Ser	Pro	Glu	Ala	Lys
225					230					235					240
Tyr	Pro	Gln	Ala	Tyr	Leu	Leu	Pro	Glu	Ala	Asp	Glu	Val	Tyr	Asn	Pro
				245						250				255	
Asp	Asp	Phe	Tyr	Gln	Glu	Glu	His	Glu	Ser	Ala	Ser	Asn	Ala	Met	Tyr
			260							265				270	
Arg	Ile	Ala	Phe	Ser	Gln	Gln	Tyr	Gly	Gly	Gly	Gly	Ser	Pro	Ala	Val
		275								280			285		
Gln	Lys	Pro	Val	Thr	Phe	Ser	Ala	Gln	Pro	Ala	Pro	Ala	Pro	Val	Arg
	290					295					300				
Glu	Ala	Pro	Ser	Pro	Val	Val	Glu	Asn	Val	Ser	Ser	Ser	Ser	Phe	Thr
305					310					315					320
Pro	Lys	Pro	Pro	Ala	Met	Ile	Asn	Asn	Phe	Gly	Glu	Glu	Met	Asn	Gln
				325						330				335	
Ile	Thr	Tyr													

<210> 46
 <211> 1276
 <212> DNA
 <213> Caenorhabditis elegans

<400> 46
 agaatctgcc aaaatgtcaa agataaagac acattccact ggctcaaaac ggacggtacc 60
 attctacaag ctgccaccgc ccgtgccact tccaccactc ccgccaccgc atccaaccgc 120
 gtacttctcg acggaaaagt acatcgccact gagcaaagat gagaaaattca aatttgatga 180
 ttacgatgtg aatgatgaga cgctgaaaaa agtgggtgtc aacgagattg gcaagtgtcc 240
 ggatatttgg agctcgcgga gccaggcagc cattatggag cactatccga ttgttgcaac 300
 tgaaacgtac aggaggacag ggttgctgtt gtctatcaaa tcgctgaaac aaatctacaa 360
 atgcggaaaag gacaatctcc gaaaccggct tcgcgtggca attgtaagca agcggcttac 420
 accggcccaa gtagaggcct atatgtggcg ctgggagttt tacggcttta ttcgctacta 480
 tcgagactat acacaacgct gggaggccga cttgttgaaa gatttggacg tgggtgctcg 540
 gctcgaggct cggcgagcat cgaaaaatat ggaaaagggtg gattctgggg agctcatgga 600
 gcccatggag cccatggatt ctacaatgga tgagatgtgc gtcgaggagg agccctacga 660
 ggagacaggg tccaattgga gcgatccggc gccggaacca tccaatcca aatcccagtc 720
 ccagaagcc aagtaccctc aagcctacct actacctgag gcggacgaag tctacaatcc 780
 tgacgatttc tatcaagagg aacatgaatc cgcatacaac gccatgtatc ggatcgcttt 840
 ctcacagcag tacggtggcg gcgggtcccc agccgtgcag aagcccgtca cttttagtgc 900
 tcagccggcg ccggcgccag ttagagaggc cccaagccca gttgtggaga atgttagttc 960
 atcgagtttc accccgaagc ccccgcccat gatcaacaat tttggtgagg agatgaacca 1020
 aataacatac caagcgatcc gtattgccc aaagcagccg gaacgtctga aattgctccg 1080
 taaggcactt ttcgacgttg tcctggcggt tgatcagaag gaatacgccg atgttgggga 1140
 tttgtacagg gatttggcgc aaaagaattc gtgataattt ttttttgagt tttttaattt 1200
 ttaatttatt tcaatttttg ttacatgttc caatataata aacagggtgt tgtttaaaaa 1260
 aaaaaaaaa aaaaaa 1276

<210> 47
 <211> 386
 <212> PRT
 <213> Caenorhabditis elegans

<400> 47
 Met Ser Lys Ile Lys Thr His Ser Thr Gly Ser Lys Arg Thr Val Pro
 1 5 10 15
 Phe Tyr Lys Leu Pro Pro Pro Val Pro Leu Pro Pro Leu Pro Pro Pro
 20 25 30

Asp Pro Thr Arg Tyr Phe Ser Thr Glu Lys Tyr Ile Ala Leu Ser Lys
 35 40 45
 Asp Glu Lys Phe Lys Phe Asp Asp Tyr Asp Val Asn Asp Glu Thr Leu
 50 55 60
 Lys Lys Val Val Leu Asn Glu Ile Gly Lys Cys Pro Asp Ile Trp Ser
 65 70 75 80
 Ser Arg Ser Gln Ala Ala Ile Met Glu His Tyr Pro Ile Val Ala Thr
 85 90 95
 Glu Thr Tyr Arg Arg Thr Gly Leu Leu Leu Ser Ile Lys Ser Leu Lys
 100 105 110
 Gln Ile Tyr Lys Cys Gly Lys Asp Asn Leu Arg Asn Arg Leu Arg Val
 115 120 125
 Ala Ile Val Ser Lys Arg Leu Thr Pro Ala Gln Val Glu Ala Tyr Met
 130 135 140
 Trp Arg Trp Glu Phe Tyr Gly Phe Ile Arg Tyr Tyr Arg Asp Tyr Thr
 145 150 155 160
 Gln Arg Trp Glu Ala Asp Leu Leu Lys Asp Leu Asp Val Val Leu Gly
 165 170 175
 Leu Glu Ala Arg Arg Ala Ser Lys Asn Met Glu Lys Val Asp Ser Gly
 180 185 190
 Glu Leu Met Glu Pro Met Glu Pro Met Asp Ser Thr Met Asp Glu Met
 195 200 205
 Cys Val Glu Glu Glu Pro Tyr Glu Glu Thr Gly Ser Asn Trp Ser Asp
 210 215 220
 Pro Ala Pro Glu Pro Ser Gln Ser Lys Ser Gln Ser Pro Glu Ala Lys
 225 230 235 240
 Tyr Pro Gln Ala Tyr Leu Leu Pro Glu Ala Asp Glu Val Tyr Asn Pro
 245 250 255
 Asp Asp Phe Tyr Gln Glu Glu His Glu Ser Ala Ser Asn Ala Met Tyr
 260 265 270
 Arg Ile Ala Phe Ser Gln Gln Tyr Gly Gly Gly Gly Ser Pro Ala Val
 275 280 285
 Gln Lys Pro Val Thr Phe Ser Ala Gln Pro Ala Pro Ala Pro Val Arg
 290 295 300
 Glu Ala Pro Ser Pro Val Val Glu Asn Val Ser Ser Ser Ser Phe Thr
 305 310 315 320
 Pro Lys Pro Pro Ala Met Ile Asn Asn Phe Gly Glu Glu Met Asn Gln
 325 330 335
 Ile Thr Tyr Gln Ala Ile Arg Ile Ala Arg Lys Gln Pro Glu Arg Leu
 340 345 350
 Lys Leu Leu Arg Lys Ala Leu Phe Asp Val Val Leu Ala Phe Asp Gln
 355 360 365
 Lys Glu Tyr Ala Asp Val Gly Asp Leu Tyr Arg Asp Leu Ala Gln Lys
 370 375 380
 Asn Ser
 385

<210> 48
 <211> 1108
 <212> DNA
 <213> Caenorhabditis elegans

<400> 48
 gcaaaaaact agatatttttg tggcattttt acaattaaaa aacctttaaa aaatggatca 60
 ccatgctatg taccgaaccg ctgaattcaa caaaactact gtccgattat tggcgggaatt 120
 catcgaaaag actgggcaga atgcgacgat agtgaatatg gacagctttt tggagttcct 180
 tgcgtatttg aatcccacgg ctccaattcc aacggttcca gaaattgaaa aataattatt 240
 gctaaaaatca ccgattcggt gcattgtgtg tggaatggaa actgaatcag attccgcagt 300

```

gacattaagc atcgataatg cttcaattat tctcacagcg acagtaattg gttactgtag 360
agatccaagt gatgcagtta atcaaattcg aaaggagagt cttcgagcat gcacgaaaca 420
tttcaacagt attttccatg tcatcttcga aggactgcaa atcgagaaca cctactgtgc 480
tcatcatgca aaatacagtc ttgccaatcg ttggtgcaaa gtctacacga tgattcgatc 540
ttccctgggc gagcagttca caaagttcga tgtgcgcaat tttaaataca tattgcaatc 600
atTTTTggat acttttgggtg aaattgatga cgacaaaaaag gataaagaat cttctcattt 660
tgatgaatgt tttgaagaaa tggattcaga aaacgtagaa attaaaatgg agagcccaca 720
agaagaagct gcagagaaat cgaagttttc tgaaaaccta gtggaggtaa aactggaacc 780
aattgaaact catgaacttg acaaaactat atccgacttt tcttcaagt atataattga 840
ttcgtcccaa aaactgcagc aaaatggttt tcctgaaaaa gtggagcaaa tggacaaata 900
tagcaacaaa ttgaaagatg aagcttcaga caaaaagtat gaaaagccag gaaaaaagga 960
ctacgttgaa gaagagggat actgggcgcc gatcaccgac agcgaggatg atgaagcctg 1020
aatttattta atcaaacgtt ttggaaattt tttttgtttt tgtcaataaa accatataac 1080
aataaaaaaa aaaaaaaaaa aactcgag 1108

```

```

<210> 49
<211> 60
<212> PRT
<213> Caenorhabditis elegans

```

```

<400> 49
Met Asp His His Ala Met Tyr Arg Thr Ala Glu Phe Asn Lys Thr Thr
 1             5             10             15
Val Arg Leu Leu Ala Glu Phe Ile Glu Lys Thr Gly Gln Asn Ala Thr
      20             25             30
Ile Val Asn Met Asp Ser Phe Leu Glu Phe Phe Ala Tyr Leu Asn Pro
      35             40             45
Thr Ala Pro Ile Pro Thr Val Pro Glu Ile Glu Lys
 50             55             60

```

```

<210> 50
<400> 50
000

<210> 51
<211> 60
<212> PRT
<213> Caenorhabditis elegans

```

```

<400> 51
Arg Cys Ile Val Cys Gly Met Glu Thr Glu Ser Asp Ser Ala Val Thr
 1             5             10             15
Leu Ser Ile Asp Asn Ala Ser Ile Ile Leu Thr Ala Thr Val Ile Gly
      20             25             30
Tyr Cys Arg Asp Pro Ser Asp Ala Val Asn Gln Ile Arg Lys Glu Ser
      35             40             45
Leu Arg Ala Cys Thr Lys His Phe Asn Ser Ile Phe
 50             55             60

```

```

<210> 52
<211> 60
<212> PRT
<213> Caenorhabditis elegans

```

```

<400> 52
Pro Cys Ile Leu Cys Glu Lys Ala Leu Leu Met Arg Glu Ser Ile Ala

```

1		5		10		15
Met	Thr	Asp	Asn	Glu	Ala	Val
		20		25		30
Gly	His	Phe	Arg	Met	Ala	Thr
	35			40		45
Leu	Arg	Met	Cys	Tyr	Asp	His
50				55		60

<210> 53
 <211> 60
 <212> PRT
 <213> Caenorhabditis elegans

<400> 53
Pro Cys Ile Ile Cys Gly Asn Glu Val Pro Gly His Arg Ser Ile Arg
1 5 10 15
Val Ser Asp Asp Asp Ala Ala Ile Phe Leu Thr Ala Ala Val Leu Thr
20 25 30
Asp Gln Lys Thr Ile Arg Gln Ala Lys Arg Asp Ile Leu Ser Glu Tyr
35 40 45
Leu Thr Val Cys Leu Arg His Ser Leu His Tyr Tyr
50 55 60

<210> 54
 <211> 60
 <212> PRT
 <213> Caenorhabditis elegans

<400> 54
Pro Cys Leu Val Cys Asn Gln Gln Met Glu Met Thr Lys Val Arg Ser
1 5 10 15
Val Asn Asn Thr Asp Ala Tyr Ile Met Ile Tyr Val Cys Val Met Asn
20 25 30
Asp Lys Tyr Asp Met Asp Lys Ala Lys Glu Leu Ala Arg Met Gln Arg
35 40 45
Phe Lys Cys Cys Val Ser His Leu Asp Glu Leu Tyr
50 55 60

<210> 55
 <211> 177
 <212> PRT
 <213> Caenorhabditis elegans

<400> 55
Met Leu Ser Ile Lys Gln Glu Leu Leu Asp Ala Pro Pro Pro Pro Pro
1 5 10 15
Ala Ala Thr Pro Leu Pro Pro Ile Thr His Arg Ile Ser Leu Ser Gly
20 25 30
Tyr Arg Asn Ile His Ala Lys Ser Phe Leu Lys Thr Met Thr Met Asp
35 40 45
Leu Cys Val Arg Arg Val Val Leu Ser Leu Leu Glu Asn Arg Arg Ala
50 55 60
Leu Trp Ile Arg Val His Lys Ser Pro Lys Ala Asp Trp Glu Val Leu
65 70 75 80
Gly Val Glu Val Phe Glu Arg Thr Gly Lys Ala Val Ser Val Lys Gln
85 90 95

Leu Gln Arg Ile Phe Leu Thr Ala Arg Asp Trp Leu Arg Arg Asn Leu
 100 105 110
 Gln Leu Tyr Ile Ile Gln Arg Lys Met Asp Lys Leu Thr Leu Asp Ala
 115 120 125
 Glu Leu Ala Lys Trp Glu Leu Tyr Pro His Phe Ile Tyr Tyr Arg Gln
 130 135 140
 Tyr Leu Gly Gln Phe Glu Ala His Leu Arg Gly Glu Glu Trp Thr Gly
 145 150 155 160
 Glu Leu Tyr Asp Asp Asp Ile Ile Cys Asp Gly Ile Met Gln Val Glu
 165 170 175
 Val

<210> 56
 <211> 75
 <212> PRT
 <213> Caenorhabditis elegans

<400> 56
 Glu Asp Ser Val Ser Tyr Thr Lys Ile Thr Glu Asp Leu Leu Gln Lys
 1 5 10 15
 Lys Pro His Lys His Arg Phe Ile Arg Gln Ala Leu Phe Lys Thr Ile
 20 25 30
 Met Ala Leu Asp Asp Asp Glu Val Glu Tyr Thr Glu Leu Ala Asp Leu
 35 40 45
 Phe Gly Asp Ile Ala Glu Gln Ser Asn Val Val Arg Arg Leu Arg Leu
 50 55 60
 Gln Arg Gln Gln Gln Arg Gly Arg Gly Glu Gln
 65 70 75

<210> 57
 <211> 178
 <212> PRT
 <213> Caenorhabditis elegans

<400> 57
 Met Ser Leu Ile Lys Gln Glu His Met His Pro Pro Pro Arg Ala Ile
 1 5 10 15
 Thr Pro Leu Pro Pro Ala Thr His Gln Ile Thr Leu Glu Glu Tyr Lys
 20 25 30
 Glu Arg Glu Lys Lys Asp Tyr Tyr Arg Asp Ala Thr Lys Asp Ala Ser
 35 40 45
 Val Lys Lys Val Val Leu Ser Leu Leu Lys Asp His Pro Gly Met Trp
 50 55 60
 Gln Asn Gly Asn Arg Phe Gln Pro Glu Lys Trp Arg Ala Leu Gly Val
 65 70 75 80
 Asp Val Tyr Gln Arg Thr Gly Gln Ile Val Arg Val Asn Asp Met Arg
 85 90 95
 Lys Met Leu Val Met Gly Lys Ser Val Leu Lys Lys Lys Ile Ala Ile
 100 105 110
 Cys Ile Arg Asp Lys Lys Leu Asp Arg Ala Ala Thr Glu Lys Asp Leu
 115 120 125
 Trp Tyr Trp Glu Tyr Tyr Arg His Phe Leu Tyr Tyr Arg Glu Thr Leu
 130 135 140
 Gly Gln Phe Glu Ala Asn Leu Arg Gly Glu Glu Trp Thr Gly Glu Asp
 145 150 155 160
 Gln Ile Gln Asp Glu Asp Asp Ile Ile Tyr Asp Gly Met Leu Asp Gly

Asp Leu

165 170 175

<210> 58
 <211> 73
 <212> PRT
 <213> Caenorhabditis elegans

<400> 58
 Arg Ser Ala Gln His Ile Ala Glu Gln Ala Lys Arg Leu Phe Leu Gln
 1 5 10 15
 Tyr Pro Glu Lys Ser Asn Leu Ile Arg Glu Thr Met Phe Lys Thr Ile
 20 25 30
 Leu Ala Phe Asp Asp Pro Ser Ala Asp Tyr Gln Asn Val Gly Glu Ile
 35 40 45
 Phe Asp Asp Leu Ala Ala Gln Glu Ala Ala Lys Lys Arg Lys Arg Ala
 50 55 60
 Glu Asn Arg Ala Gln Arg Glu Gln Gln
 65 70

<210> 59
 <211> 179
 <212> PRT
 <213> Caenorhabditis elegans

<400> 59
 Met Ser Leu Ile Lys Gln Glu His Met Asn Pro Pro Pro Arg Thr Ile
 1 5 10 15
 Thr Pro Leu Pro Pro Pro Thr His Gln Ile Thr Ile Glu Glu Tyr Lys
 20 25 30
 Glu Arg Val Lys Arg Asp Tyr Tyr Arg Asn Ala Thr Lys Asp Thr Ser
 35 40 45
 Leu Lys Lys Val Val Leu Ser Leu Ile Lys Asp Arg Lys Ala Met Trp
 50 55 60
 Ala Pro Ala Ala Lys Pro Ser Glu Asp Lys Trp Gln Lys Leu Gly Ala
 65 70 75 80
 Glu Val Phe Ser Arg Thr Gly Lys Val Val Ser Val Thr Gln Leu Arg
 85 90 95
 Arg Met Leu Val Ser Ser Lys His Val Leu Lys Thr Lys Met Ser His
 100 105 110
 Cys Ile Lys Val Lys Lys Met Asp Arg Val Ser Thr Glu Ala Tyr Leu
 115 120 125
 Trp Asn Trp Glu Phe Tyr Arg His Phe Leu Tyr Tyr Arg Glu Met Leu
 130 135 140
 Asp Arg Phe Glu Ala Asn Leu Arg Gly Lys Gln Trp Thr Gly Glu Asp
 145 150 155 160
 Gln Pro Thr Asp Asp Asp Asp Ile Ile Cys Asp Gly Ile Phe Glu
 165 170 175
 Val Glu Met

<210> 60
 <211> 70
 <212> PRT
 <213> Caenorhabditis elegans

<400> 60

Ser Thr Ala Glu Gln Ile Gly Glu Glu Ile Asp Arg Leu Ile Gln Leu
1 5 10 15
Tyr Pro Gln Arg Glu Met Leu Ile Arg Gln Ala Phe Phe Lys Thr Ile
20 25 30
Phe Ala Leu Glu Asp Glu Thr Val Glu Phe Ser Asn Leu Gly Asp Leu
35 40 45
Phe Glu Asp Leu Ala Glu Gln Glu Asn Phe Lys Arg Arg Arg Arg Ser
50 55 60
Arg Ala Gln Arg Leu Glu
65 70

<210> 61

<211> 187

<212> PRT

<213> Caenorhabditis elegans

<400> 61

Met Leu Asn Ile Lys Gln Glu Gly Val Val Ala Asp Ala Pro Arg Ala
1 5 10 15
Leu Thr Pro Ile Pro Pro Phe Ile His His Val Ser Met Glu Glu Tyr
20 25 30
Met Gly Met Glu Leu Asn Ser Val Tyr Glu Glu Ala Thr Lys Asp Ser
35 40 45
Ala Leu Lys Lys Val Val Leu Asp Leu Leu Lys Asp Arg Pro Gly Met
50 55 60
Trp Gln Asn Gly Asn Arg Phe Gln Leu Glu Asn Trp Arg Glu Leu Gly
65 70 75 80
Val Asp Val Tyr Gln Arg Thr Gly Gln Ile Val Arg Ala Glu Leu Gly
85 90 95
Glu Val Ser Val Asn Asp Met His Arg Met Phe Val Val Gly Lys Ala
100 105 110
Val Leu Lys Gln Lys Ile Thr Val Cys Ile Arg Tyr Lys Lys Leu Asp
115 120 125
Arg Ala Ala Thr Glu Ala Asp Leu Gln Asn Trp Glu Phe Tyr Arg His
130 135 140
Phe Arg Tyr Tyr Arg Glu Thr Leu Gly Gln Phe Glu Ala Asn Leu Arg
145 150 155 160
Gly Glu Gln Trp Thr Gly Glu Asp Gln Pro Ala Asp Asp Asp Asp
165 170 175
Ile Ile Tyr Asp Gly Ile Phe Glu Val Glu Met
180 185

<210> 62

<211> 69

<212> PRT

<213> Caenorhabditis elegans

<400> 62

Ser Thr Ala Glu Gln Ile Gly Glu Glu Ile Asp Arg Leu Ile Gln Leu
1 5 10 15
Tyr Pro Gln Arg Glu Met Leu Ile Arg Gln Ala Phe Phe Lys Thr Ile
20 25 30
Phe Ala Leu Glu Asp Glu Thr Val Glu Phe Ser Asn Leu Gly Asp Leu
35 40 45
Phe Glu Asp Leu Ala Glu Gln Glu Asn Phe Lys Arg Arg Arg Arg Ser
50 55 60

Ala Gln Arg Leu Glu
65

<210> 63
<211> 186
<212> PRT
<213> Caenorhabditis elegans

<400> 63
Met Met Asn Pro Lys Glu Glu Pro Arg Pro Phe Ser Ile Val Pro Leu
1 5 10 15
Pro Arg Pro Pro Arg Pro Thr Thr Pro Leu Pro Pro Ile Ser His Cys
20 25 30
Ile Thr Met Ala Asp Tyr Leu Leu Leu Glu Asn Thr Lys Phe His Lys
35 40 45
Thr Ala Thr Arg Ala Pro Lys Ile Lys Lys Val Leu Leu Ser Leu Leu
50 55 60
Lys Asp Arg Pro Glu Ile Trp Asp Arg Lys Ala Gln Phe Ser Ala Lys
65 70 75 80
Asn Trp Gln Asn Leu Gly Val Glu Val Tyr Glu Arg Thr Gly Tyr Ile
85 90 95
Val Arg Ser Asn Asp Leu His Lys Met Leu Arg Thr Ala Lys Val Val
100 105 110
Leu Lys Asn Lys Leu Arg Thr Cys Ile Gly Ile Lys Lys Leu Asp Arg
115 120 125
Ala Ala Thr Glu Thr Glu Leu Trp Lys Trp Glu Tyr Tyr Pro His Phe
130 135 140
Ile Tyr Tyr Arg Glu Thr Leu Gly His Phe Glu Ala Asn Leu Arg Gly
145 150 155 160
Glu Pro Trp Asp Gly Glu Ala His Ile Asp Asp Asp Asp Asp Ile
165 170 175
Ile Tyr Glu Gly Tyr Trp Glu Ala Asp Lys
180 185

<210> 64
<211> 70
<212> PRT
<213> Caenorhabditis elegans

<400> 64
Asn Ser Ala Gln His Ile Gly Glu Gln Val His Arg Leu Phe Ala Gln
1 5 10 15
Tyr Pro Glu Arg Ser Lys Leu Phe Arg Glu Thr Leu Phe Lys Thr Ile
20 25 30
Leu Ala Leu Glu Glu Pro Glu Tyr Glu His Ala Ala Glu Val Phe Thr
35 40 45
Asp Leu Ala Gln Ser Glu Thr Ala Lys Arg Arg Arg Arg Ser Glu Ala
50 55 60
Thr Trp Gln Asn Gly Gln
65 70

<210> 65
<211> 186
<212> PRT
<213> Caenorhabditis elegans

[illegible]

```
<210> 66
<211> 66
<212> PRT
<213> Caenorhabditis elegans
```

[illegible]

```
<210> 67
<211> 178
<212> PRT
<213> Caenorhabditis elegans
```

Met 1	Ser	Arg	Ile	Lys 5	Gln	Glu	Gln	Val	Asn 10	Pro	Pro	Pro	Pro	Pro	Arg
Ala	Ile	Thr	Pro	Leu	Pro	Pro	Ala	Thr	His	Arg	Ile	Thr	Met	Asp	Glu
			20					25					30		
Tyr	Lys	Lys	Arg	Glu	Lys	Lys	Asp	Tyr	Tyr	Arg	Asp	Ala	Thr	Lys	Asp
		35					40					45			
Ala	Ser	Val	Lys	Lys	Val	Val	Leu	Ser	Leu	Leu	Lys	Asp	Tyr	Pro	Asp
	50					55					60				

Met	Trp	Gln	Asn	Gly	Asn	Arg	Phe	Gln	Thr	Arg	Lys	Trp	Arg	Ala	Leu
65					70					75					80
Gly	Val	Glu	Val	Tyr	Gln	Arg	Thr	Gly	Gln	Ile	Val	Gly	Val	Asp	Asp
				85					90					95	
Met	Arg	Lys	Met	Phe	Met	Ser	Gly	Lys	Thr	Val	Leu	Lys	Gln	Lys	Ile
			100					105					110		
Thr	Phe	Cys	Ile	Arg	Asn	Met	Lys	Met	Asp	Arg	Ala	Ala	Thr	Glu	Ala
		115					120					125			
Asp	Leu	Gln	Asn	Trp	Glu	Tyr	Tyr	Arg	His	Phe	Leu	Tyr	Tyr	Arg	Gln
	130					135					140				
Thr	Leu	Gly	Lys	Phe	Glu	Ala	Lys	Leu	Arg	Gly	Glu	Gln	Trp	Ile	Gly
145					150					155					160
Glu	Asp	Gln	Val	Glu	Asp	Asp	Asp	Glu	Asp	Asp	Val	Ile	Phe	Asp	Gly
				165				170						175	
Glu	Ser														

<210> 68
 <211> 410
 <212> PRT
 <213> Caenorhabditis elegans

<400> 68
Met Gly Thr Cys Trp Gly Asp Ile Ser Glu Asn Val Arg Val Glu Val
1 5 10 15
Pro Asn Thr Asp Cys Ser Leu Pro Thr Lys Val Phe Trp Ile Ala Gly
20 25 30
Ile Val Lys Leu Ala Gly Tyr Asn Ala Leu Leu Arg Tyr Glu Gly Phe
35 40 45
Glu Asn Asp Ser Gly Leu Asp Phe Trp Cys Asn Ile Cys Gly Ser Asp
50 55 60
Ile His Pro Val Gly Trp Cys Ala Ala Ser Gly Lys Pro Leu Val Pro
65 70 75 80
Pro Arg Thr Ile Gln His Lys Tyr Thr Asn Trp Lys Ala Phe Leu Val
85 90 95
Lys Arg Leu Thr Gly Ala Lys Thr Leu Pro Pro Asp Phe Ser Gln Lys
100 105 110
Val Ser Glu Ser Met Gln Tyr Pro Phe Lys Pro Cys Met Arg Val Glu
115 120 125
Val Val Asp Lys Arg His Leu Cys Arg Thr Arg Val Ala Val Val Glu
130 135 140
Ser Val Ile Gly Gly Arg Leu Arg Leu Val Tyr Glu Glu Ser Glu Asp
145 150 155 160
Arg Thr Asp Asp Phe Trp Cys His Met His Ser Pro Leu Ile His His
165 170 175
Ile Gly Trp Ser Arg Ser Ile Gly His Arg Phe Lys Arg Ser Asp Ile
180 185 190
Thr Lys Lys Gln Asp Gly His Phe Thr Asp Pro Pro His Leu Phe Ala
195 200 205
Lys Val Lys Glu Val Asp Gln Ser Gly Glu Trp Phe Lys Glu Gly Met
210 215 220
Lys Leu Glu Ala Ile Asp Pro Leu Asn Leu Ser Thr Ile Cys Val Ala
225 230 235 240
Thr Ile Lys Arg Val Leu Ala Asp Gly Phe Leu Met Ile Gly Ile Asp
245 250 255
Gly Ser Glu Ala Ala Asp Gly Ser Asp Trp Phe Cys Tyr His Ala Thr
260 265 270
Ser Pro Ser Ile Phe Pro Val Gly Phe Cys Glu Ile Asn Met Ile Glu

	275		280		285										
Leu	Thr	Pro	Pro	Arg	Gly	Tyr	Thr	Lys	Leu	Pro	Phe	Lys	Trp	Phe	Asp
	290					295					300				
Tyr	Leu	Arg	Glu	Thr	Gly	Ser	Ile	Ala	Ala	Pro	Val	Lys	Leu	Phe	Asn
305					310						315				320
Lys	Asp	Val	Pro	Asn	His	Gly	Phe	Arg	Val	Gly	Met	Lys	Leu	Glu	Ala
				325						330					335
Val	Asp	Leu	Met	Glu	Pro	Arg	Leu	Ile	Cys	Val	Ala	Thr	Val	Thr	Arg
			340					345					350		
Ile	Ile	His	Arg	Leu	Leu	Arg	Ile	His	Phe	Asp	Gly	Trp	Glu	Glu	Glu
		355					360					365			
Tyr	Asp	Gln	Trp	Val	Asp	Cys	Glu	Ser	Pro	Asp	Leu	Tyr	Pro	Val	Gly
	370					375					380				
Trp	Cys	Gln	Leu	Thr	Gly	Tyr	Gln	Leu	Gln	Pro	Pro	Ala	Ser	Gln	Cys
385					390					395					400
Lys	Leu	Val	Tyr	Arg	Lys	Gly	Val	Leu	Leu						
				405					410						

<210> 69
 <211> 512
 <212> PRT
 <213> Caenorhabditis elegans

<400> 69

Met	Asn	Phe	Ser	Asn	Lys	Lys	Val	Ile	Leu	Lys	Ala	Phe	Leu	Ser	Lys
1				5					10					15	
Asn	Ile	Ile	Tyr	Tyr	Phe	Gln	Arg	Gln	Tyr	Asn	Tyr	Lys	Leu	Glu	Glu
		20						25					30		
Ala	Glu	Tyr	Arg	Tyr	Phe	Thr	Glu	Glu	Arg	Leu	Phe	Tyr	Arg	Arg	Arg
		35					40					45			
Asn	Pro	Val	Glu	Lys	Ile	Ala	Gln	Arg	Ile	Pro	Lys	Pro	Gln	Ile	Glu
	50				55					60					
Gly	Thr	Phe	Thr	Trp	Ser	Asp	Glu	Leu	Arg	Cys	Asn	Tyr	Asp	Gly	Asn
65				70					75					80	
Thr	Gln	Phe	Leu	Pro	Val	Glu	Ala	Leu	Glu	Gly	Cys	Leu	Pro	Leu	Glu
			85					90					95		
Lys	Leu	Asn	Gln	His	Leu	Lys	Pro	Gly	Phe	Arg	Leu	Glu	Val	Val	Val
		100						105					110		
Arg	Pro	Ser	Leu	Asp	Pro	Ser	Ile	Thr	Thr	Lys	Ser	Pro	Glu	Ile	Arg
		115					120					125			
Trp	Phe	Gly	Glu	Val	Thr	Ala	Val	Cys	Gly	Phe	Tyr	Val	Ala	Ile	Lys
	130					135					140				
Phe	Val	Gly	Glu	Leu	Asn	Arg	Arg	Pro	Cys	Trp	Phe	His	Met	Leu	Ser
145				150					155					160	
Glu	Asp	Ile	Phe	Asp	Ile	Gly	Ser	Gly	Leu	Lys	Gln	Asp	Pro	Ala	Met
			165					170						175	
Lys	Trp	Leu	Gln	Tyr	Arg	Pro	Leu	Ser	Leu	Leu	Lys	Pro	Met	Gln	Cys
		180					185						190		
Pro	Lys	Phe	Trp	Arg	Arg	Gly	Ser	Thr	Pro	Ala	Pro	Pro	Val	Pro	Arg
		195				200						205			
Pro	Thr	Glu	Glu	Ile	Leu	Asp	Glu	Phe	Gln	Ala	Glu	Leu	His	Glu	Asn
	210					215					220				
Arg	Ile	Ser	Glu	Pro	Lys	Ile	Phe	Asp	Gln	Leu	Arg	His	Leu	Ala	His
225				230					235					240	
Arg	Pro	Ser	Arg	Phe	Arg	Leu	Asn	Gln	Arg	Val	Glu	Leu	Leu	Asn	Tyr
			245						250					255	
Leu	Glu	Pro	Thr	Glu	Ile	Arg	Val	Ala	Arg	Ile	Leu	Arg	Ile	Leu	Gly
			260					265					270		

Arg	Arg	Leu	Met	Val	Met	Val	Thr	Ala	Gln	Asp	Tyr	Pro	Glu	Asp	Leu
		275					280					285			
Pro	Ser	Val	Glu	Ala	Lys	Asp	Arg	Gln	Val	Gln	His	Glu	Asn	Val	Glu
		290				295					300				
Phe	Trp	Val	Asp	Glu	Ser	Ser	Phe	Phe	Leu	Phe	Pro	Val	Gly	Phe	Ala
					310					315					320
Met	Ile	Asn	Gly	Leu	Arg	Thr	Lys	Ala	Thr	Glu	Gly	Tyr	Leu	Glu	His
			325						330					335	
Ser	Arg	Arg	Ile	Ala	Glu	Gly	Ser	Gly	Thr	Glu	Lys	Leu	Asn	Leu	Leu
			340					345					350		
Lys	Val	Gly	Gln	Lys	Phe	Glu	Leu	Leu	Asp	Pro	Leu	Ser	Asp	Leu	Arg
		355					360					365			
Gln	Ser	Phe	Cys	Val	Ala	Thr	Ile	Arg	Lys	Ile	Cys	Lys	Thr	Pro	Gly
		370				375					380				
Phe	Leu	Ile	Ile	Ser	Pro	Asp	Glu	Thr	Glu	Ser	Asp	Asp	Glu	Ser	Phe
				390						395					400
Pro	Ile	His	Ile	Asp	Asn	His	Phe	Met	His	Pro	Val	Gly	Tyr	Ala	Glu
				405					410					415	
Lys	Phe	Gly	Ile	Lys	Leu	Asp	Arg	Leu	Ala	Gly	Thr	Glu	Pro	Gly	Lys
			420					425					430		
Phe	Lys	Trp	Glu	Gly	Tyr	Leu	Lys	Glu	Lys	Gln	Ala	Glu	Lys	Ile	Pro
		435					440					445			
Asp	Glu	Met	Leu	Arg	Pro	Leu	Pro	Ser	Lys	Glu	Arg	Arg	His	Met	Phe
		450				455					460				
Glu	Phe	Gly	Arg	Val	Leu	Glu	Ala	Val	Gly	Gln	Asn	Glu	Thr	Tyr	Trp
					470					475					480
Ile	Ser	Pro	Ala	Ser	Val	Glu	Glu	Val	His	Gly	Arg	Thr	Val	Leu	Ile
				485					490					495	
Glu	Phe	Gln	Gly	Trp	Asp	Ser	Glu	Phe	Ser	Glu	Leu	Tyr	Asp	Met	Glu
			500					505					510		

<210> 70
 <211> 411
 <212> PRT
 <213> Caenorhabditis elegans

<400> 70															
Met	Ser	Glu	Phe	Leu	Lys	Ile	Val	Arg	Ala	Asn	Lys	Lys	Ser	Asp	Arg
1				5					10				15		
Lys	Leu	Asp	Lys	Thr	Tyr	Leu	Trp	Glu	Ser	Tyr	Leu	His	Gln	Phe	Glu
			20					25				30			
Lys	Gly	Lys	Thr	Ser	Phe	Ile	Pro	Val	Glu	Ala	Phe	Asn	Arg	Asn	Leu
			35				40					45			
Thr	Val	Asn	Phe	Asn	Glu	Cys	Val	Lys	Glu	Gly	Val	Ile	Phe	Glu	Thr
	50				55					60					
Val	Val	His	Asp	Tyr	Asp	Lys	Asn	Cys	Asp	Ser	Ile	Gln	Val	Arg	Trp
				70					75						80
Phe	Ala	Arg	Ile	Glu	Lys	Val	Cys	Gly	Tyr	Arg	Val	Leu	Ala	Gln	Phe
			85					90						95	
Ile	Gly	Ala	Asp	Thr	Lys	Phe	Trp	Leu	Asn	Ile	Leu	Ser	Asp	Asp	Met
		100						105					110		
Phe	Gly	Leu	Ala	Asn	Ala	Ala	Met	Ser	Asp	Pro	Asn	Met	Asp	Lys	Ile
		115					120					125			
Val	Tyr	Ala	Pro	Pro	Leu	Ala	Ile	Asn	Glu	Glu	Tyr	Gln	Asn	Asp	Met
	130					135					140				
Val	Asn	Tyr	Val	Asn	Asn	Cys	Ile	Asp	Gly	Glu	Ile	Val	Gly	Gln	Thr
	145			150					155					160	
Ser	Leu	Ser	Pro	Lys	Phe	Asp	Glu	Gly	Lys	Ala	Leu	Leu	Ser	Lys	His

				165				170					175			
Arg	Phe	Lys	Val	Gly	Gln	Arg	Leu	Glu	Leu	Leu	Asn	Tyr	Ser	Asn	Ser	
			180					185					190			
Thr	Glu	Ile	Arg	Val	Ala	Arg	Ile	Gln	Glu	Ile	Cys	Gly	Arg	Arg	Met	
		195					200					205				
Asn	Val	Ser	Ile	Thr	Lys	Lys	Asp	Phe	Pro	Glu	Ser	Leu	Pro	Asp	Ala	
	210					215					220					
Asp	Asp	Asp	Arg	Gln	Val	Phe	Ser	Ser	Gly	Ser	Gln	Tyr	Trp	Ile	Asp	
	225				230					235					240	
Glu	Gly	Ser	Phe	Phe	Ile	Phe	Pro	Val	Gly	Phe	Ala	Ala	Val	Asn	Gly	
			245						250					255		
Tyr	Gln	Leu	Asn	Ala	Lys	Lys	Glu	Tyr	Ile	Glu	His	Thr	Asn	Lys	Ile	
		260					265						270			
Ala	Gln	Ala	Ile	Lys	Asn	Gly	Glu	Asn	Pro	Arg	Tyr	Asp	Ser	Asp	Asp	
	275					280						285				
Val	Thr	Phe	Asp	Gln	Leu	Ala	Lys	Asp	Pro	Ile	Asp	Pro	Met	Ile	Trp	
	290					295					300					
Arg	Lys	Val	Lys	Val	Gly	Gln	Lys	Phe	Glu	Leu	Ile	Asp	Pro	Leu	Ala	
	305				310					315					320	
Gln	Gln	Phe	Asn	Asn	Leu	His	Val	Ala	Ser	Ile	Leu	Lys	Phe	Cys	Lys	
			325						330					335		
Thr	Glu	Gly	Tyr	Leu	Ile	Val	Gly	Met	Asp	Gly	Pro	Asp	Ala	Leu	Glu	
		340					345						350			
Asp	Ser	Phe	Pro	Ile	His	Ile	Asn	Asn	Thr	Phe	Met	Phe	Pro	Val	Gly	
	355					360						365				
Tyr	Ala	Glu	Lys	Tyr	Asn	Leu	Glu	Leu	Val	Pro	Pro	Asp	Glu	Phe	Lys	
	370				375					380						
Gly	Thr	Phe	Arg	Trp	Asp	Glu	Tyr	Leu	Glu	Lys	Glu	Ser	Ala	Glu	Thr	
	385				390				395					400		
Leu	Pro	Leu	Asp	Leu	Phe	Lys	Pro	Met	Pro	Ser						
			405						410							

<210> 71
 <211> 498
 <212> PRT
 <213> Caenorhabditis elegans

<400>	71															
Met	Ser	Glu	Phe	Leu	Lys	Ile	Val	Arg	Ala	Asn	Lys	Lys	Ser	Asp	Arg	
	1			5					10					15		
Lys	Leu	Asp	Lys	Thr	Tyr	Leu	Trp	Glu	Ser	Tyr	Leu	His	Gln	Phe	Glu	
		20						25					30			
Lys	Gly	Lys	Thr	Ser	Phe	Ile	Pro	Val	Glu	Ala	Phe	Asn	Arg	Asn	Leu	
		35					40					45				
Thr	Val	Asn	Phe	Asn	Glu	Cys	Val	Lys	Glu	Gly	Val	Ile	Phe	Glu	Thr	
	50				55					60						
Val	Val	His	Asp	Tyr	Asp	Lys	Asn	Cys	Asp	Ser	Ile	Gln	Val	Arg	Trp	
	65			70					75					80		
Phe	Ala	Arg	Ile	Glu	Lys	Val	Cys	Gly	Tyr	Arg	Val	Leu	Ala	Gln	Phe	
			85					90						95		
Ile	Gly	Ala	Asp	Thr	Lys	Phe	Trp	Leu	Asn	Ile	Leu	Ser	Asp	Asp	Met	
		100						105					110			
Phe	Gly	Leu	Ala	Asn	Ala	Ala	Met	Ser	Asp	Pro	Asn	Met	Asp	Lys	Ile	
	115					120						125				
Val	Tyr	Ala	Pro	Pro	Leu	Ala	Ile	Asn	Glu	Glu	Tyr	Gln	Asn	Asp	Met	
	130				135						140					
Val	Asn	Tyr	Val	Asn	Asn	Cys	Ile	Asp	Gly	Glu	Ile	Val	Gly	Gln	Thr	
	145				150					155					160	

100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500

50	Val	Val	His	Asp	Tyr	Asp	Lys	Asn	Cys	Asp	Ser	Ile	Gln	Val	Arg	Trp
65	Phe	Ala	Arg	Ile	Glu	Lys	Val	Cys	Gly	Tyr	Arg	Val	Leu	Ala	Gln	Phe
				85						90					95	
	Ile	Gly	Ala	Asp	Thr	Lys	Phe	Trp	Leu	Asn	Ile	Leu	Ser	Asp	Asp	Met
			100						105					110		
	Phe	Gly	Leu	Ala	Asn	Ala	Ala	Met	Ser	Asp	Pro	Asn	Met	Asp	Lys	Ile
			115					120					125			
	Val	Tyr	Ala	Ser	Pro	Leu	Ala	Ile	Asn	Glu	Glu	Tyr	Gln	Asn	Asp	Met
		130					135					140				
	Val	Asn	Tyr	Val	Asn	Asn	Cys	Ile	Asp	Gly	Glu	Ile	Val	Gly	Gln	Thr
		145				150					155					160
	Ser	Leu	Ser	Pro	Lys	Phe	Asp	Glu	Gly	Lys	Ala	Leu	Leu	Ser	Lys	His
				165					170						175	
	Arg	Phe	Lys	Val	Gly	Gln	Arg	Leu	Glu	Leu	Leu	Asn	Tyr	Ser	Asn	Ser
			180						185					190		
	Thr	Glu	Ile	Arg	Val	Ala	Arg	Ile	Gln	Glu	Ile	Cys	Gly	Arg	Arg	Met
			195					200					205			
	Asn	Val	Ser	Ile	Thr	Lys	Lys	Asp	Phe	Pro	Glu	Ser	Leu	Pro	Asp	Ala
		210				215						220				
	Asp	Asp	Asp	Arg	Gln	Val	Phe	Ser	Ser	Gly	Ser	Gln	Tyr	Trp	Ile	Asp
		225			230						235					240
	Glu	Gly	Ser	Phe	Phe	Ile	Phe	Pro	Val	Gly	Phe	Ala	Ala	Val	Asn	Gly
				245					250						255	
	Tyr	Gln	Leu	Asn	Ala	Lys	Lys	Glu	Tyr	Ile	Glu	His	Thr	Asn	Lys	Ile
			260					265						270		
	Ala	Gln	Ala	Ile	Lys	Asn	Gly	Glu	Asn	Pro	Arg	Tyr	Asp	Ser	Asp	Asp
		275					280					285				
	Val	Thr	Phe	Asp	Gln	Leu	Ala	Lys	Asp	Pro	Ile	Asp	Pro	Met	Ile	Trp
		290				295					300					
	Arg	Lys	Val	Lys	Val	Gly	Gln	Lys	Phe	Glu	Leu	Ile	Asp	Pro	Leu	Ala
		305			310					315						320
	Gln	Gln	Phe	Asn	Asn	Leu	His	Val	Ala	Ser	Ile	Leu	Lys	Phe	Cys	Lys
				325					330						335	
	Thr	Glu	Gly	Tyr	Leu	Ile	Val	Gly	Met	Asp	Gly	Pro	Asp	Ala	Leu	Glu
			340					345					350			
	Asp	Ser	Phe	Pro	Ile	His	Ile	Asn	Asn	Thr	Phe	Met	Phe	Pro	Val	Gly
		355						360				365				
	Tyr	Ala	Glu	Lys	Tyr	Asn	Leu	Glu	Leu	Val	Pro	Pro	Asp	Glu	Phe	Lys
		370				375					380					
	Gly	Thr	Phe	Arg	Trp	Asp	Glu	Tyr	Leu	Glu	Lys	Glu	Ser	Ala	Glu	Thr
		385			390					395						400
	Leu	Pro	Leu	Asp	Leu	Phe	Lys	Pro	Met	Pro	Ser	Gln	Glu	Arg	Leu	Asp
				405					410						415	
	Lys	Phe	Lys	Val	Ile	Leu	Ile	Ser	Lys	Arg	Val	Gly	Leu	Arg	Leu	Glu
			420					425					430			
	Ala	Ala	Asp	Met	Cys	Glu	Asn	Gln	Phe	Ile	Cys	Pro	Ala	Thr	Val	Lys
		435					440						445			
	Ser	Val	His	Gly	Arg	Leu	Ile	Asn	Val	Asn	Phe	Asp	Gly	Trp	Asp	Glu
		450				455					460					
	Glu	Phe	Asp	Glu	Leu	Tyr	Asp	Val	Asp	Ser	His	Asp	Ile	Leu	Pro	Ile
		465			470					475						480
	Gly	Trp	Cys	Glu	Ala	His	Ser	Tyr	Val	Leu	Gln	Pro	Pro	Lys	Lys	Tyr
				485					490						495	
	Asn	Tyr														

<210> 73
 <211> 1497
 <212> DNA
 <213> Caenorhabditis elegans

<400> 73
 atgtctgaat ttctgaaaat tgtcagagct aacaaaaaat cggacagaaa actcgataag 60
 acctacttgt gggaatccta tttacatcag ttcgagaaag gaaaaacttc tttcattcca 120
 gttgaagcat tcaatcgtaa ccttacagtt aattttaacg aatgcgtgaa ggaaggagtt 180
 atcttcgaaa cagtgggtcca tgattatgac aagaactgcg attcgattca agtcagatgg 240
 tttgcacgaa ttgaaaaagt ttgctggatac agagttctgg ctacagtttat cggagctgac 300
 acgaaatddd ggctcaatat tttatcggac gatatgtttg gtttggcaaa cgccgcaatg 360
 agtgatccca atatggataa aattgtatat gctccgccgc ttgcaatcaa cgaagaatac 420
 caaaatgata tggtaaaatta tgtaaaataat tgcattgatg gcgaaatcgt cggccaaact 480
 tcgctgtctc caaaattcga tgaagggaag gctctcctaa gcaagcatcg tttcaaagtt 540
 ggacaacgctc ttgaactatt aaattattcc aattctactg aaatacgcgt agcgcgaatt 600
 caagaaatat gtggacgacg aatgaatgta tctatcacia agaaagactt tcccgaatcg 660
 cttccagatg cagatgacga cagacaagtc tttagctctg gatctcaata ttggatagac 720
 gaggggaagct tcttcatatt tctgtttgga tttgcagcag tcaatggata tcaactaaat 780
 gcgaaaaagg aatatattga gcacacaaat aaaattgctc aagcaataaa aaatggagaa 840
 aatccaagat atgactcaga cgacgtcaca tttgatcaat tagcaaaaaga tccaattgat 900
 cccatgattt ggagaaaagt taagggttga caaaagtttg agctcatcga ccccttggct 960
 cagcaattca ataacctcca cgctcgcttcg attctcaaat tttgcaaaac tgaaggatat 1020
 cttattgtgg gaattgatgg tccagatgca cttgaagaca gttttcctat tcatatcaat 1080
 aatacattta tgttcccagt tggttatgag gaaaagtata atttggaact tgttccgcca 1140
 gatgagttca aaggaacatt cagatgggat gaatacttgg agaaagaatc tgcagaaacc 1200
 ctaccgcttg acttgttcaa gccaatgcct tccaaagaga gattagacaa atttaaggta 1260
 attctgattt ccaaacgggt aggactacgc cttgaagctg ctgacatgtg tgaaaatcag 1320
 tttatttgtc cagctacagt gaaatcagtt catggaagac tgataaatgt caatttcgac 1380
 ggctgggatg aagaatttga tgaactgtat gatgtggact cccatgatat tctaccgata 1440
 ggatgggtgtg aagcgcacag ttatgttcta caacctccga aaaagtacaa ctattga 1497

<210> 74
 <211> 1497
 <212> DNA
 <213> Caenorhabditis elegans

<400> 74
 atgtctgaat ttctgaaaat tgtcagagct aacaaaaaat cggacagaaa actcgataag 60
 acctacttgt gggaatccta tttacatcag ttcgagaaag gaaaaacttc tttcattcca 120
 gttgaagcat tcaatcgtaa ccttacagtt aattttaacg aatgcgtgaa ggaaggagtt 180
 atcttcgaaa cagtgggtcca tgattatgac aagaactgcg attcgattca agtcagatgg 240
 tttgcacgaa ttgaaaaagt ttgctggatac agagttctgg ctacagtttat cggagctgac 300
 acgaaatddd ggctcaatat tttatcggac gatatgtttg gtttggcaaa cgccgcaatg 360
 agtgatccca atatggataa aattgtatat gctccgccgc ttgcaatcaa cgaagaatac 420
 caaaatgata tggtaaaatta tgtaaaataat tgcattgatg gcgaaatcgt cggccaaact 480
 tcgctgtctc caaaattcga tgaagggaag gctctcctaa gcaagcatcg tttcaaagtt 540
 ggacaacgctc ttgaactatt aaattattcc aattctactg aaatacgcgt agcgcgaatt 600
 caagaaatat gtggacgacg aatgaatgta tctatcacia agaaagactt tcccgaatcg 660
 cttccagatg cagatgacga cagacaagtc tttagctctg gatctcaata ttggatagac 720
 gaggggaagct tcttcatatt tctgtttgga tttgcagcag tcaatggata tcaactaaat 780
 gcgaaaaagg aatatattga gcacacaaat aaaattgctc aagcaataaa aaatggagaa 840
 aatccaagat atgactcaga cgacgtcaca tttgatcaat tagcaaaaaga tccaattgat 900
 cccatgattt ggagaaaagt taagggttga caaaagtttg agctcatcga ccccttggct 960
 cagcaattca ataacctcca cgctcgcttcg attctcaaat tttgcaaaac tgaaggatat 1020
 cttattgtgg gaattgatgg tccagatgca cttgaagaca attttcctat tcatatcaat 1080
 aatacattta tgttcccagt tggttatgag gaaaagtata atttggaact tgttccgcca 1140
 gatgagttca aaggaacatt cagatgggat gaatacttgg agaaagaatc tgcagaaacc 1200
 ctaccgcttg acttgttcaa gccaatgcct tccaaagaga gattagacaa atttaaggta 1260

attctgattt	ccaaacgggt	aggactacgc	cttgaagctg	ctgacatgtg	tgaaaatcag	1320
tttatttgtc	cagctacagt	gaaatcagtt	catggaagac	tgataaatgt	caatttcgac	1380
ggctgggatg	aagaatttga	tgaactgtat	gatgtggact	cccatgatat	tctaccgata	1440
ggatggtgtg	aagcgcacag	ttatgttcta	caacctccga	aaaagtacaa	ctattga	1497

<210> 75

<211> 1497

<212> DNA

<213> *Caenorhabditis elegans*

<400> 75

atgtctgaat	ttctgaaaat	tgtcagagct	aacaaaaaat	cggacagaaa	actcgataag	60
acctacttgt	gggaatccta	tttacatcag	ttcgagaaag	gaaaaacttc	tttcattcca	120
gttgaagcat	tcaatcgtaa	ccttacagtt	aatttttaacg	aatgcgtgaa	ggaaggagtt	180
atcttcgaaa	cagtgggtcca	tgattatgac	aagaactgcy	attcgattca	agtcagatgg	240
tttgcacgaa	ttgaaaaagt	ttgcggatac	agagttctgg	ctcagtttat	cggagctgac	300
acgaaatttt	ggctcaatat	tttatcggac	gatatgtttg	gtttggcaaa	cgccgcaatg	360
agtgatccca	atatggataa	aattgtatat	gcttcgccgc	ttgcaatcaa	cgaagaatac	420
caaaatgata	tggtaaatta	tgtaaataat	tgcattgatg	gcgaaatcgt	cggccaaact	480
tcgctgtctc	caaaattcga	tgaagggaag	gctctcctaa	gcaagcatcg	tttcaaagtt	540
ggacaacgtc	ttgaactatt	aaattattcc	aattctactg	aaatacgcgt	agcgcgaatt	600
caagaaatat	gtggacgacg	aatgaatgta	tctatcacaa	agaaagactt	tcccgaatcg	660
cttccagatg	cagatgacga	cagacaagtc	tttagctctg	gatctcaata	ttggatagac	720
gaggggaagct	tcttcatatt	tctgtttgga	tttgcagcag	tcaatggata	tcaactaaat	780
gcgaaaaagg	aatatattga	gcacacaaat	aaaattgctc	aagcaataaa	aaatggagaa	840
aatccaagat	atgactcaga	cgacgtcaca	tttgatcaat	tagcaaaaga	tccaattgat	900
cccatgattt	ggagaaaagt	taagggttga	caaaagtttg	agctcatcga	ccccttggct	960
cagcaattca	ataacctcca	cgtcgcttcg	atttctcaat	tttgcaaaac	tgaaggatat	1020
cttattgtgg	gaatggatgg	tccagatgca	cttgaagaca	gttttcctat	tcatatcaat	1080
aatacattta	tggtcccagt	tggttatgcy	gaaaagtata	atttgggaact	tgttccgcga	1140
gatgatgttca	aagggaacatt	cagatgggat	gaatacttgg	agaaagaatc	tgcagaaacc	1200
ctaccgcttg	acttgtttcaa	gccaatgcct	tccaagaga	gattagacaa	attttaaggta	1260
attctgattt	ccaaacgggt	aggactacgc	cttgaagctg	ctgacatgtg	tgaaaatcag	1320
tttatttgtc	cagctacagt	gaaatcagtt	catggaagac	tgataaatgt	caatttcgac	1380
ggctgggatg	aagaatttga	tgaactgtat	gatgtggact	cccatgatat	tctaccgata	1440
ggatggtgtg	aagcgcacag	ttatgttcta	caacctccga	aaaagtacaa	ctattga	1497

<210> 76

<211> 2307

<212> DNA

<213> *Caenorhabditis elegans*

<400> 76

atgctaaaaat	tagtcatttt	gtgcttcgcy	ttgttctaca	atacagtcag	ttcgacaaga	60
tttctgtttg	gcgtcgaaagt	taagtgtgat	tttgatgaag	tgttccaatt	aacagtgctg	120
cattgggaag	acgatggcaa	tacttttttg	gatcgcgatg	aagacatcac	tggacgtatg	180
actatgtttg	ctcgaaagaa	aatatttttc	tatcaggacg	gccatcatgg	atttgaattt	240
ggaaagctcg	agccttatgg	gtggtttctg	cacaattgca	cgaaaaatgg	aaattttcgc	300
gagtataagg	acgggttgag	tagcaccagt	ggatccaatg	ggttgaggta	tattgagtac	360
actgtgaatt	tgacgaacgc	ctgagaaata	tcaaatcaaa	tcgaactaac	tttcaatttc	420
aataaacatt	ctctctaatt	acgtttttaa	ccagtcttaa	tttcagatgt	ctgaatttct	480
gaaaattgtc	agagctaaca	aaaaatcgga	cagaaaactc	gataagacct	acttgtggga	540
atcctattta	catcagttcg	agaaaggaaa	aacttctttc	attccagttg	aagcattcaa	600
tcgtaacctt	acagttaatt	ttaacgaatg	cgtgaaggaa	ggagttatcg	tgagttcata	660
ttgttcgtaa	atcggtttta	aaatacaatt	ttttagattc	gaaacagtg	tccatgatta	720
tgacaagaac	tgcgattcga	ttcaagtcag	atggtttgca	cgaattgaaa	aagtttgcyg	780
atacagagtt	ctggctcagt	ttatcggagc	tgacacgaaa	ttttggctca	atattttatc	840
ggacgatatg	tttggttttg	caaagtaagt	tgacgcgtca	gctctttcta	ctatttctaa	900
taaataatgg	ttctgttaca	taaaattcta	gagaacaatc	gtattaaaaac	ttcgaaacat	960

ttgtataata	gtaaaatttg	aacattttcag	cgccgcaatg	agtgatccca	atatggataa	1020
aattgtatat	gctccgccgc	ttgcaatcaa	cgaagaatac	caaaatgata	tggtaaatta	1080
tgtaaagtga	agttttgttt	tttccgaatt	tatgttaata	tcatctcaca	acttcagaat	1140
tgcatgtgat	gcgaaatcgt	cggccaaact	tcgctgtctc	caaaattcga	tgaagggaag	1200
gctctcctaa	gcaagcatcg	tttcaaagtt	ggacaacgtc	ttgaactatt	aaattattcc	1260
aattctactg	aaatacgcg	agcgcgaatt	caagaaatat	gtggacgacg	aatgaatgta	1320
tctatcacaa	agaaagactt	tcccgaatcg	cttccagatg	cagatgacga	cagacaagtc	1380
tttagctctg	gatctcaata	ttggatagac	gagggaaagct	tcttcatatt	tcctgttgga	1440
tttgcagcag	tcaatggata	tcaactaaat	gcgaaaaagg	aatatattga	gcacacaaat	1500
aaaattgctc	aagcaataaa	aaatggagaa	aatccaagat	atgactcaga	cgacgtcaca	1560
tttgatcaat	tagcaaaaaga	tccaattgat	cccatgattt	ggagaaaagt	taagggttga	1620
caaaagtttg	agctcatcga	ccccttggct	cagcaattca	ataacctcca	cgctcgcttcg	1680
attctcaaat	tttgcaaaac	tgaaggatat	cttattgttg	gaatggatgg	tccagatgca	1740
cttgaagaca	gttttcctat	tcatatcaat	aatacattta	tgttcccagt	tggttatgca	1800
gaaaagtata	atttggaaact	tgttccgcca	gatgagttca	aaggaacatt	cagatgggat	1860
gaatacttgg	agaaagaatc	tgcagaaacc	ctaccgcttg	acttgttcaa	gccaatgcct	1920
tcccaagaga	gattagacaa	atttaaggta	attctgattt	ccaaacgggt	tgttttatat	1980
cgtttgagat	tgtttcacta	ttaatagtta	ttcataattg	tttcttggtt	taaggtagga	2040
ctacgccttg	aagctgctga	catgtgtgaa	aatcagttta	tttgtccagc	tacagtgaat	2100
tcagttcatg	gaagactgat	aaatgtcaat	ttcgacggct	gggatgaaga	atttgatgaa	2160
ctgtatgatg	tggagtgaat	ttatcatgac	cgaacgacat	tttttcaatg	aaaattctat	2220
catttcagct	cccatgatat	tctaccgata	ggatggtgtg	aagcgcacag	ttatgttcta	2280
caacctccga	aaaagtacaa	ctattga				2307

<210> 77
 <211> 2307
 <212> DNA
 <213> Caenorhabditis elegans

<400> 77						
atgctaaaaat	tagtcatctt	gtgcttcg	ttgttctaca	atacagtcag	ttcgacaaga	60
tttctgtttg	gcgtcggaag	taagtgtgat	tttgatgaag	tgttccaatt	aacagtgctg	120
cattgggaag	acgatggcaa	tacttttttg	gatcgcgatg	aagacatcac	tggacgtatg	180
actatgtttg	ctcgaaagaa	aatatttttc	tatcaggacg	gccatcatgg	atttgaattt	240
ggaaagctcg	agccttatgg	gtgggttctg	cacaattgca	cgaaaaatgg	aaattttcgc	300
gagtataggc	acgggttgag	tagcaccagt	ggatccaatg	ggttggagta	tattgagtac	360
actgtgaatt	tgacgaacgc	ctgagaaaata	tcaaatcaaa	tcgaactaac	tttcaatttc	420
aataaacatt	ctctctaatt	acgtttttaa	ccagtcttaa	tttcagatgt	ctgaatttct	480
gaaaattgtc	agagctaaca	aaaaatcgga	cagaaaactc	gataagacct	acttgtggga	540
atcctattta	catcagttcg	agaaaggaaa	aacttctttc	attccagttg	aagcattcaa	600
tcgtaacctt	acagttaatt	ttaacgaaatg	cgtgaaggaa	ggagtattcg	tgagttcata	660
ttgttcgtaa	atcggtttta	aaatacaatt	tttgtagtgc	gaaacagtgg	tccatgatta	720
tgacaagaac	tgcgattcga	ttcaagtcag	atggtttgca	cgaattgaaa	aagtttgctg	780
atacagagtt	ctggctcagt	ttatcggagc	tgacacgaaa	ttttggctca	atattttatc	840
ggacgatatg	tttgggtttg	caaagtaagt	tggacgctca	gctctttcta	ctattctaaa	900
taaataatgg	ttctgttaca	taaaattcta	gagaacaatc	gtattaaaac	ttcgaaacat	960
ttgtataata	gtaaaatttg	aacattttcag	cgccgcaatg	agtgatccca	atatggataa	1020
aattgtatat	gctccgccgc	ttgcaatcaa	cgaagaatac	caaaatgata	tggtaaatta	1080
tgtaaagtga	agtttgtttt	tttccgaatt	tatgttaata	tcatctcaca	acttcagaat	1140
tgcatgtgat	gcgaaatcgt	cggccaaact	tcgctgtctc	caaaattcga	tgaagggaag	1200
gctctcctaa	gcaagcatcg	tttcaaagtt	ggacaacgtc	ttgaactatt	aaattattcc	1260
aattctactg	aaatacgcg	agcgcgaatt	caagaaatat	gtggacgacg	aatgaatgta	1320
tctatcacaa	agaaagactt	tcccgaatcg	cttccagatg	cagatgacga	cagacaagtc	1380
tttagctctg	gatctcaata	ttggatagac	gagggaaagct	tcttcatatt	tcctgttgga	1440
tttgcagcag	tcaatggata	tcaactaaat	gcgaaaaagg	aatatattga	gcacacaaat	1500
aaaattgctc	aagcaataaa	aaatggagaa	aatccaagat	atgactcaga	cgacgtcaca	1560
tttgatcaat	tagcaaaaaga	tccaattgat	cccatgattt	ggagaaaagt	taagggttga	1620
caaaagtttg	agctcatcga	ccccttggct	cagcaattca	ataacctcca	cgctcgcttcg	1680
attctcaaat	tttgcaaaac	tgaaggatat	cttattgttg	gaatggatgg	tccagatgca	1740

